CAUT calls on government to keep research promises

by Helen Baxter
Bulletin Editor

The Canadian Association of University Teachers has placed the federal government on notice that it expects it to keep its election promises regarding university research.

In a report on the subject released September 9, the Association said that during last year's election campaign the Progressive Conservative Party had made detailed pledges with regard to core university funding and research and development policy — pledges it has not yet kept.

The Progressive Conservative government has not yet dealt "in a comprehensive and rational manner with the problem of the funding of university research and of the core operations of the university which support that research," the report said.

The CAUT expressed alarm that the federal government was already showing "signs of retreat" in two key areas vital to university research. In a belt-tightening exercise over the past year, government departments have been encouraged to cut out, or to substantially reduce, research contracts with universities. And recently, the Department of Finance suggested that federal transfer payments to the provinces, perhaps for post-secondary education, may be cut.

The report pointed to the "fruitful collaboration" on research between universities and various federal government departments — a productive effort that is now being jeopardized by government cuts. The budgets of the departments of Agriculture, Fisheries, the Environment, and the Ministry of State for Science and Technology have all been slashed; and further major cuts are being threatened. The CAUT said the cutbacks will have a negative impact on the university research foundation and serious ramifications for the industries concerned.

It also cited the 50% cut in the Science Council's budget which has reduced the staff from 68 person-years to 30, and the plans to cut all university research by Transport Canada.

The report sharply criticized Mr. Wilson's recommendation in the 1985 budget for a $2 billion cut in federal transfer payments to the provinces.

"Any cut in the transfers to the provinces for post-secondary education would be a clear and explicit violation of the promise made in the 1984 election," the CAUT said.

During the election campaign, the Progressive Conservative Party had declared itself "committed to sustaining the current federal financial commitment, according to the formula set out in the 1977 agreement." The 1977 Established Programs Financing Agreement was designed to ensure adequate core funding for the universities (as well as for hospitalization and medicare) and depends on the co-operation and contributions of both levels of government.

The CAUT stressed that university research programs can only be carried out in the context of adequate general funding of the universities. Research grants do not provide funds for general upkeep of the university, for library supplies, for professors' salaries and student aid, all of which are integral to the research effort, the Association said.

The CAUT said that it is now looking to the fate of the development plans of two of the federal research granting councils to gauge the government's support for funding research. The five-year plans of the Natural Sciences and Engineering Research Council (NSERC) and the Social Sciences and Humanities Council (SSHRC) are currently before the government and decisions in the area are expected to be announced this fall.

The three granting councils — NSERC, SSHRC, and the Medical Research Council — are the prime supporters of university research. "The fate of the budgets of these agencies will clearly indicate to university researchers whether

See **PROMISES/10**

CANADIAN ASSOCIATION OF UNIVERSITY TEACHERS
ASSOCIATION CANADIENNE DES PROFESSEURS D'UNIVERSITE
CAUT ACPU
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Recherche et développement: le fédéral se fait tirer l'oreille

par Helen Baxter
rédactrice en chef

L'association canadienne des professeurs d'université a averti le gouvernement fédéral qu'elle s'attendait à ce qu'il respecte ses promesses électorales en matière de recherche universitaire.

Dans un rapport rendu public le 9 septembre, l'association a déclaré que, lors de la dernière campagne électorale, le Parti progressiste-conservateur avait fait des promesses précises relativement au financement de base des universités et à une politique de recherche et de développement. Il n'a pas encore tenu ses promesses.

Le gouvernement conservateur "ne s'est pas encore occupé de près et de façon rationnelle du problème du financement de la recherche universitaire et des opérations de base des universités qui soutiennent la recherche", indique le rapport.

L'ACPU s'inquiète du fait que le gouvernement fédéral montre déjà des "signes de recul" dans deux secteurs essentiels à la recherche universitaire. Au cours de la dernière année, le gouvernement a resserré les cordons de la bourse et a encouragé ses ministères à cesser d'accorder des contrats de recherche aux universités ou à les diminuer substantiellement. Récemment, le ministère des Finances a suggéré que les paiements de transfert aux provinces, peut-être ceux au titre de l'enseignement postsecondaire, soient supprimés.

Le rapport souligne la "collaboration fructueuse" entre les universités et divers ministères fédéraux dans le domaine de la recherche. Cet effort collectif et constructif est maintenant menacé par les compressions du gouvernement. Le budget des ministères de l'Agriculture, des Pêches, de l'Environnement et du ministère d'Etat aux Sciences et à la Technologie a été réduit radicalement. La menace d'autres coupures importantes plane toujours. L'ACPU affirme que les compressions auront un effet négatif sur la recherche universitaire et des répurcussions graves sur les industries visées.

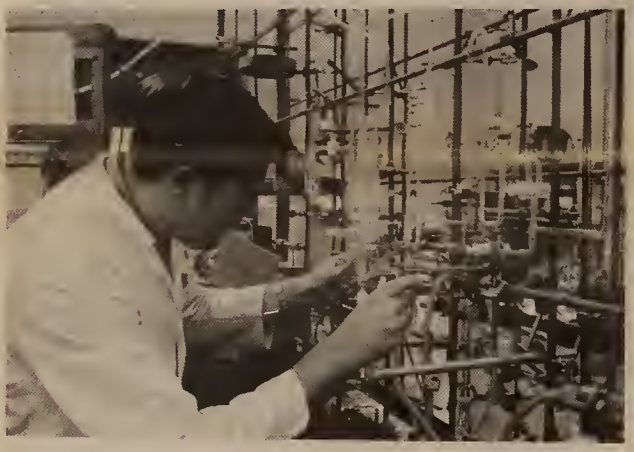
L'association mentionne en outre que le budget du Conseil des sciences a été réduit de 50% et que le personnel a passé de 68 à 30 années-personnes. D'autre part, Transports Canada projette de supprimer tous les travaux de recherche effectués par les universités.

Le rapport critique sévèrement la recommandation de M. Wilson, dans le budget de 1985, de réduire de 2 milliards de dollars les paiements de transfert aux provinces.

"Une réduction des transferts au titre de l'enseignement postsecondaire violerait la promesse faite pendant la campagne électorale de 1984", soutient l'ACPU.

Au cours de la campagne électorale, le Parti pro-

Voir **PROMESSES/10**



Council grants will show govt. support for R & D: CAUT

by Helen Baxter
Bulletin Editor

The Canadian Association of University Teachers says cabinet decisions made this fall on the budgets of the three federal research granting councils will give a clear signal of the present government's support of university research. They will also inform Canadians as to whether or not it intends to seriously pursue research and development in Canada.

The CAUT urged the government, in a September 9 report on research, to demonstrate its good intentions by approving the draft five-year plans of the Natural Sciences and Engineering Research Council (NSERC) and the Social Sciences and Humanities Research Council (SSHRCC), as well as the current plan of the Medical Research Council (MRC).

The three granting agencies, which are the prime supporters of university research, have seen a general decline in funding since the late 1970s. One of the few financial gains came under the previous Progressive Conservative government, when funding for NSERC was increased by 32.1%, for MRC by 22.3%, and for SSHRCC by 9.3%. Since then, there has been a continuing battle to maintain this plateau, says the CAUT.

The Association, which has lobbied hard over the years on behalf of the granting councils, says strong support of university research is particularly vital at this time both for the health of Canada's universities and for the country as a whole.

"It is especially important for the university system in Canada because of the present financial crisis in the universities which is undermining both access and quality," says CAUT President Ed Anderson.

Support of home-grown research is also critical at this time, says the CAUT, because

See **COUNCILS/10**

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Special claims

At the Learned Societies meetings this past May the Canadian Historical Association issued a public statement asserting the 'certain knowledge' of its membership that contrary to the arguments of Messrs. Zundel and Keegstra, the Holocaust is not fiction but fact. While it is no doubt true that the Association is inspired by a desire to inform the public about what informed people think, it is not at all clear that the assumption behind the gesture was a good one, nor that the tack the Association took was the right one.

The assumption was spelled out by the Association's President, Susan Mann Trofimenkoff, in an interview. "It's very important," she said, "that historians say that a lot of silly people with silly ideas are turning an actual fact of history into a debatable point." But is it?

It certainly would be useful to the cause of truth for the Association to put out a paper systematically refuting the various claims advanced by the Messrs, but it is by no means clear that a Proclamation of the sort advanced by the Association is any legitimate substitute. In fact it is not. As a response to the challenges hurled at the profession by the so-called Holocaust revisionists it is lame, and as an intervention in our public life it is élitist and patronizing.

The Association's statement does nothing at all to confute the arguments of the 'revisionists,' it simply relies on the prestige and authority of its membership to carry the burden of argument. Proclamations of this sort might convince those who are accustomed to looking to authorities to find their truths, but they are insulting to those who assume their reasoning powers to be roughly equal to those assumed by members of the Association.

Not convinced? Well then, ask yourself what special claims to knowledge of the Holocaust come with expertise, let us say, as an historian of the Canadian fur trade? A specialization in this area would certainly not preclude a better than average knowledge of the Holocaust, but it would confer none either.

To be sure, an historian as an historian might lay claim to a superior general knowledge of what those specializing in the Holocaust understand to have happened, but there is certainly a world of difference between knowing what someone else has said and knowing whether and why what is said is right or wrong. In choosing to inform the public not about the Holocaust but about what its membership thinks, the Association both overestimates its own importance and underestimates the intelligence of the Canadian public.

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Correction

La rédaction signale une erreur dans le numéro du volume, en première page, de l'édition de septembre 1985 du **Bulletin.** Il aurait fallu lire Vol. 32, no. 5 et non no 4. A noter que le présent numéro est le vol. 32, no. 6.

Bulletin error

Please note that there was an error in the volume/issue number on the cover of the September 1985 edition of the *Bulletin.* The number should have read Volume Vol. 32, No. 5 (not No. 4). Note also that this issue is Vol. 32, No. 6.

Damaging

The recent use of the Canadian Charter of Rights and other Legislation to scuttle mandatory retirement clauses in University contracts is very damaging to Universities and of very little connection with the real factors which generated this legislation. There is a lot of difference between basic human rights and the legal compulsion to keep on elderly professors at huge salaries, who could equally well retire on very adequate pensions. I strongly urge CAUT to withdraw from any legal test cases which force this issue, and instead encourage local associations to negotiate contracts which give professors rights to continue on beyond retirement age, but at much reduced teaching or research-only positions, and reduced pay.

I do not believe that the CAUT, or any university professor really believe that any university Professor should have the right to continue indefinitely in a teaching position. We all know the facts: that professors at retirement age earn the salary of two to three starting assistant professors (what about *their* rights) at a time in their lives when they have very little use for such quantities of money; we know that with increasing age interest often declines in good teaching and research, that knowledge becomes more and more outdated, that total contribution to the University declines even though political influence seems to persist. We all know that it is next to impossible to fire such a professor no matter how poor their teaching and research becomes.

The fact that a number of exceptionally good professors do not fit my generalizations does not change the fact that mandatory retirement was a very efficient way of solving these problems, even though it is crude and lacks discrimination. Unfortunately, human rights legislation does not change the laws of nature which ensure that, without exception, each of us grows old and eventually declines physically and mentally.

To put it bluntly, CAUT's support for this legislation is support for increasingly mediocre universities. It makes CAUT look more and more like the numerous professional societies which concentrate on protecting their members at the expense of the public and of the quality of the services their members provide. Such moves give increasing support to the attempts by politicians and administrators to destroy tenure, to control hiring and to undermine other privileged positions of the university community.

Each CAUT member should, until some better alternative is negotiated, respect the old retirement laws — knowing that two or three productive and enthusiastic younger people can be hired with the typical retirement salary.

P.W. Aitchison
Applied Mathematics Dept.
University of Manitoba

Real issues

I am sure that a vast number of university teachers throughout Canada will have been intrigued at the regret expressed by a lawyer of Calgary, who would have wished the dispute at issue in the Crowe affair of 1958 settled in court. Sheldon M. Chumir writes ("Free Speech": *CAUT Bulletin*, May 1985, p. 10): "The two great *causes célèbres* of academic freedom in this country, the threatened dismissal of Frank Underhill...and the firing of Harry S. Crowe by United College in 1958, were never litigated." (...) "Indeed, they took place in an era when there was little likelihood that protection could successfully be sought from any principle of law affirming the right of freedom of speech."

Mr. Chumir reveals himself to be unaware of the real issues in the Crowe affair. For anyone to claim that the Crowe affair was solely, or even principally, a case of freedom of speech or of academic freedom must wilfully blind himself to the facts. Crowe was dismissed by United College for legitimate causes which were, moreover, supported by the college faculty association of the time — an association made up of professors who were themselves members of the CAUT.

I will state a few facts about the Crowe affair. The then CAUT president, Clarence Barber, of the University of Manitoba, received a request from the Queen's faculty association to set up an investigative committee to inquire into the matters in dispute at United College. He did so. (Note: (1) Queen's had no business making such a request. (2) Barber had no authority to act as he did, and the committee so set up was never subsequently approved by the CAUT executive council. (3) Barber did not consult United College faculty association about it.) Barber 'appointed' three professors: V.C. Fowke, D.W. Slater, Martin Johns. Slater and Johns were asked to withdraw because of possible bias — Slater because he was at Queen's, Johns because he was an active United Church man. Barber invited Bora Laskin, a law professor at Osgood Hall, and Laskin agreed to serve on the committee. No third person was invited.

Barber drew up what he called: "Provisional Statement of Facts Respecting the Dismissal of Harry Crowe by United College." In drafting this statement Barber interviewed only one member of the faculty — Stuart Reid, of all people, a friend of Crowe's! He sent his 'Statement' to Fowke and Laskin, and to the officers of the CAUT executive. He did not send it to the faculty association, nor to the College Principal, nor to the Board chairman. Barber called it a statement of 'facts' — when it was precisely the facts that were in dispute. There were, in the statement, as a matter of record, no fewer than nine errors of fact.

When Fowke and Laskin arrived in Winnipeg to begin their investigation, the College had still not received a copy of the statement, nor of the terms of reference of the investigation committee. The College Board protested against the structure of the committee and proposed in its place a five-man committee to comprise two members appointed by CAUT, two by the College, and a fifth, the chairman, to be appointed by the four. Barber rejected this proposal; and the College properly refused to have anything to do with the CAUT committee.

Throughout the affair Crowe never ceased to reiterate the allegation that: "A private letter of mine to a colleague was intercepted, mysteriously forwarded to the Principal who read it, retained it, photostated it and used it to my serious detriment." Crowe, at Kingston, did not know what was going on at Winnipeg at the time and was kept 'informed' only by his friends Packer, McNaught and Stingle. It was they who fed Crowe the false idea that his position at United College would become untenable because of the letter. Crowe's statement contains no fewer than three erroneous allegations. And there is not an iota of evidence even in the Fowke-Laskin report, biased as it is, that the Principal intended to use Crowe's letter against him. On the contrary, the evidence points the other way.

In November 1958 the Dean of Arts and Science, O.T. Anderson, was killed in an automobile accident. The Board appointed Dr. Gordon Blake as Dean. Dr. Blake was aware of what was going on. He knew for a certitude that Principal Lockhart had not intercepted the mails and had never used or intended to use Crowe's or any other letter to anyone's detriment. He opposed Crowe and faction and was instrumental in organizing a concerted resistance to their campaign.

See **TO THE EDITOR/4**

CENSURED ADMINISTRATIONS

The following university administrations are under CAUT censure:

President and Board of Governors
UNIVERSITY OF CALGARY (1979)
The third stage of censure was imposed in May, 1980.
President and Board of Regents
MEMORIAL UNIVERSITY OF NEWFOUNDLAND (1979)
The third stage of censure was imposed in May, 1980.

Note:
1. Under the first stage of censure faculty members are advised to inform themselves fully of the procedures which exist for the protection of academic freedom before accepting an appointment at the censured university. The censure is advertised regularly in the *CAUT Bulletin.*
2. Under the second stage of censure faculty members are advised to inform themselves fully of the procedures which exist for the protection of academic freedom before accepting an appointment at the censured university. The censure is advertised more widely in Canadian and foreign faculty association publications and other publications.
3. Under the third stage of censure the CAUT Council recommends that members of faculty associations not accept appointments at the censured university.
4. Because the CAUT does not recommend that faculty members decline appointments when a university is under the first or second stage of censure the *CAUT Bulletin* continues to carry advertisements for positions vacant at censured universities. Such advertisements are not carried in the *Bulletin* for universities under the third stage of censure.

INSIDE

- **R & D: quel sort le gouvernement lui réserve-t-il?/3**
- **CAUT OPPOSES Macdonald commission proposal to end federal/provincial transfer arrangement and institute student voucher system instead/3**
- **UBC SUFFERS further setbacks in its effort to balance budget/5**
- **BC SURVEY shows strong public support for universities/5**
- **UBC'S PRESIDENT ELECT says he is optimistic about the university picture in B.C./7**
- **UN SCHÈMA INTÉGRÉ de la tâche professorale est presenté par deux professeurs de l'UQUAM/8**

REGULAR FEATURES

À la rédactrice/To the editor/2; La puce à l'oreille/5; Briefly.../6; Positions available/Positions disponibles/11

R & D: quel sort le gouvernement lui réserve-t-il?

par Helen Baxter

Selon l'Association canadienne des professeurs d'université, les décisions qui seront prises cet automne par le Cabinet relativement aux budgets des trois conseils de recherche subventionnaires indiqueront clairement si le gouvernement actuel appuie la recherche universitaire et s'il a l'intention de s'occuper sérieusement de la recherche et du développement au Canada.

Dans un rapport rendu public le 9 septembre, l'ACPU a pressé le gouvernement de prouver ses bonnes intentions en approuvant les projets de plans quinquennaux du Conseil de recherches en sciences naturelles et en génie (CRSNG) et du Conseil de recherches en sciences humaines (CRSH) ainsi que le plan actuel du Conseil de recherches médicales (CRM).

Les trois organismes subventionnaires, principales sources d'appui à la recherche universitaire, connaissent depuis la fin des années soixante-dix une diminution générale de leur financement. La situation s'était quelque peu redressée sous le gouvernement de M. Clark lorsque les Conservateurs avaient augmenté les crédits au CRSNG de 32,1%, ceux au CRM de 22,3% et ceux aux CRSH de 9,3%. Depuis, il a fallu lutter constamment pour que soit préservé ce plateau, soutient l'ACPU.

L'association qui, depuis des années, exerce des pressions au nom des conseils subventionnaires, ajoute qu'un solide appui à la recherche universitaire est particulièrement vital à l'heure actuelle tant pour la santé des universités canadiennes que pour le pays.

"Cela revêt une importance particulière étant donné la crise financière que connaissent les universités et qui réduit tant l'accessibilité que la qualité", a déclaré le président de l'ACPU, M. Ed Anderson.

L'appui à la recherche au Canada arrive à un point critique, affirme l'ACPU, en raison de l'accroissement du volume de la recherche militaire aux Etats-Unis. "Si l'on n'adopte pas, poursuit-elle, une politique de recherche et de développement viable et bien financée et qui aurait un lien significatif et dynamique avec les universités", l'intensification de la recherche militaire aux Etats-Unis accompagnée du maintien d'une forte demande en personnel spécialisé "augmentera l'exode des cerveaux vers ce pays".

Selon l'ACPU, de nombreuses personnes influentes dont l'actuel premier ministre, prennent la défense de la recherche et du développement depuis quelques années.

En mars 1984, prenant la parole à l'Université de Toronto, le premier ministre Mulroney a promis que le Canada atteindrait un objectif correspondant à 2,5% du PNB pour les dépenses en recherche et en développement, prise de position que les chercheurs universitaires favorisent depuis longtemps. Dans son livre intitulé *Telle est ma position*, M. Mulroney a soutenu que les compressions budgétaires du programme des 6 et 5% du gouvernement libéral ne devaient pas s'appliquer à la recherche et au développement.

En 1983, la Société royale du Canada a fait une déclaration d'intérêt national sur le sous-financement des universités dans le domaine des sciences et de la technologie, soulignant l'urgence de donner priorité à la recherche universitaire.

"A défaut d'agir ainsi, a déclaré la Société, le Canada continuera de miner les instruments importants de recherche scientifique qu'il s'est donné dans les universités et il compromettra l'avenir des sciences et de la technologie au pays."

L'ACPU fait également référence au rapport de M. A.W. Johnson rendu public en 1985 et qui fait état du problème: *Pour une meilleure orientation du financement de l'enseignement postsecondaire et de la recherche par le Gouvernement du Canada*. M. Johnson recommande l'adoption d'un plan quinquennal efficace plutôt que des budgets annuels pour les conseils subventionnaires et l'augmentation annuelle de leurs crédits budgétaires au cours des cinq prochaines années. L'ACPU appuie fortement ces recommandations.

Mulroney: 2,5% du PNB pour les dépenses en recherche et développement?

CAUT opposes Macdonald Commission proposal for student voucher system

by Donald C. Savage
CAUT Executive Secretary

The report of the Macdonald Royal Commission on the economy, which was made public in September, offers significant recommendations for higher education. It calls for a freeze on financial support of higher education by government and a shift of costs to students. The Commission also recommends that the current federal/provincial transfer arrangements be ended and that the federal funds be directed to the universities through the payment of student vouchers which would be taxed back by the universities.

The Macdonald Commission, like the Bovey Commission in Ontario, recommends substantially higher fees for students along with increased student aid. In Ontario, all three political parties opposed the recommendations of the Bovey Commission to restrict access and to substantially increase the fees.

Donald Macdonald

The Macdonald Commission also suggests that universities should set their own fees in order to create a scenario which would deliberately depress the quality of undergraduate education in some institutions and favour excellence in a few. "Some institutions", it states, "would be likely to offer low-cost 'no frills' education, while others would provide more intensive, higher-level education intended to set very high standards of achievement". The Commission recommends, as did the Bovey Report, the adoption of contingency repayment arrangements.

The present position of the CAUT with regard to these issues is that both fees and financial assistance should increase gradually with the cost of living. Student fees in real dollar terms have not changed much in a generation and thus it is clear that governments and universities have generally followed this pattern. A sub-committee of the CAUT is studying the question of fees and aid. The Association is, however, committed to the view that the universities must be accessible to all qualified students who wish to enter and is opposed to fee structures which would impair that situation.

It also recommends that quality undergraduate education should be available in all parts of the country. The importance of availability increases with the rise in the percentage of students over twenty-one since many of these older students have jobs and family commitments which would not allow them to move to another city. It is, however, obvious that highly expensive graduate and research programs in medicine, engineering and science must be concentrated. But the CAUT, like the Bovey Commission, does not favour intellectual monopoly and has recommended that governments should ensure a degree of competition between graduate programs.

The Commission's most dramatic recommendation is to restructure the federal financial role. It recognizes that the existing system, whereby Ottawa transfers $2.2 billion to the provinces in unrestricted grants, simply is not working. It suggests the termination of these transfers and the payment of the funds by means of student vouchers to the universities.

The voucher scheme was chosen deliberately in order to cause a transfer of funds between provinces. Newfoundland, Prince Edward Island, New Brunswick, Manitoba, Saskatchewan, Alberta and British Columbia would be losers. Ontario, Quebec, and Nova Scotia would be winners. In some cases, the loses involved would be substantial. The decreases as a percentage of operational grants (based on 1982/83 data) would be as follows: Newfoundland — 8.4%; Prince Edward Island — 12.3%; New Brunswick — 9.3%; Manitoba — 5.4%; Saskatchewan — 7.8%; Alberta — 1.7%; British Columbia — 8.8%.

The CAUT currently favours reform of the existing transfer system in such a way as to provide incentives to the provinces to spend more. A voucher system would provide no such incentives. In fact, as Dr. A.W. Johnson has suggested in his report to the Secretary of State, the effect could well be to encourage the provinces to reduce their commitments because the response of the students would likely be to demand that Ottawa increase the value of their vouchers. Since there are a lot of student voters, many in key urban constituencies, federal politicians may feel that they have no option but to bow to such demands.

The CAUT is of the opinion that reform of the existing system is much more likely than root and branch change. The particular form of voucher recommended by Macdonald illustrates the point of political practicality. It is unlikely that a Conservative federal government would be able to persuade the provinces to accept a scheme which would make the majority of them losers. Nor does it seem likely that Prime Minister Mulroney would propose a scheme which would disadvantage a considerable number of Conservative premiers in order to benefit Liberal Ontario.

The Macdonald Commission suggests a fall-back position if vouchers are not accepted. It recommends that the federal transfer payments be frozen and that the savings be used to fund the indirect costs of research in the universities — this would free accomplished researchers from teaching loads and underwrite the purchase of capital equipment — and the creation of centres of specialization and

See MACDONALD/10

ACADEMIC GERIATRICIAN
University of Ottawa
Geriatrics

The section of Geriatrics at the Ottawa Civic Hospital is seeking an academic geriatrician. This position would carry a geographic full-time faculty appointment at the University of Ottawa. Salary commensurate with qualifications and experience. The physician must have the Certificate of Special Competence in Geriatric Medicine or extensive training and experience. The duties will include patient care, teaching to undergraduate and postgraduate trainees and research in ambulatory care and health service delivery. Bilingualism and extensive experience and abilities with the use of computers in research are desired. In accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada.
Send applications to: Dr. W.B. Dalziel
Head
Geriatric Assessment Unit
Ottawa Civic Hospital
1053 Carling Avenue
Ottawa, Ontario
K1Y 4E9

SEMAINE NATIONALE DES JINIVERSITÉS
DU 19 AU 27 OCTOBRE

LES IDÉES
On ne peut les voir, ni les toucher, mais impossible de s'en passer.

Les idées, nous en faisons notre alliée
Elles nous ont permis des découvertes médicales qui sauvent des vies. Elles nous ont fait produire des céréales plus résistantes dont la planète affamée a besoin
Le jour où nous nous sommes demandé qui nous étions, elles nous ont fait apprécier notre patrimoine culturel et linguistique
Nous savons l'importance des idées Nous ne pouvons vivre sans elles. Vous non plus
Les universités du Canada

UN COURANT D'IDÉES
DANS VOTRE COMMUNAUTÉ

Real issues...2

On November 26th Reid, McNaught and Stingle resigned. Their resignations were dated five days *before* Fowke and Laskin's Report was issued, and it is difficult to believe that they were not privy to the substance of the Report. All three letters of resignation attacked Dr. Blake without any cause except that of his opposition to them.

Not only that, but all three resignations were conditional on the reinstatement of Crowe *without conditions of ony kind*, and on the removal of Dr. Blake. These self-proclaimed champions of academic freedom were demanding the demoting of a colleague and denying him the very right they pretended to be defending in the interest of a friend.

The Fowke-Laskin report was favourable to Crowe, as it had been clear from the outset that it intended to be. It even went so far as to ape Crowe's false allegations: "The report finds that the Reverend Principal W.C. Lockhart retained and improperly intercepted private letter, made photostatic copies of it, and disclosed its contents to other persons." The accusations contained in the verbs 'retained', 'intercepted', and 'disclosed' are clearly incorrect. The truth about the letter could easily have been ascertained if Fowke and Laskin had wanted to discover it. (Whether it is palatable to the CAUT or not, it was Crowe himself who disclosed the contents of his letter to the Board of Regents. The Report also states: "The report further finds that the Regents...dismissed Professor Crowe without telling him their reasons..." How far from the truth can one get! Three months previously the Board had informed all faculty, in writing, of the reasons for Crowe's dismissal. This letter is reproduced in the Report as Document No. 40 to Appendix "A". "(Crowe) has imputed improper and false motives to the Principal and has made accusations against him of distortion, and grotesqueness, deliberately misrepresenting the facts to accomplish this end.") Among its conclusions was the following: The Crowe affair was "an episode in the Canadian academic community which, it is to be hoped, will never be duplicated." Let us hope not indeed! For a more disgracefully biased, one-sided, partisan report, which set out to blacken the innocent and to depict the culpable as victims, is difficult to imagine.

Shortly after the Fowke-Laskin report was made public, the United College faculty association published a counter-report, repudiating the CAUT findings and asserting that all professors had always enjoyed complete academic freedom at United College.

In conclusion, I refer you to the CAUT Report by Fowke and Laskin and advise you that several documents submitted to the committee were not reproduced: letter of May 2, 1958, from Colonel Wilson, Q.C., to Harry Crowe (Document No. 5 of Appendix "A"); letters of May 27 and June 11, 1958, from Colonel Wilson to Harry Crowe (Documents 12 and 18 of Appendix "A"); letter from Mr. A. Watson, chairman of the Board of Regents, of August 27, 1958, to Prof. Clarence Barber (See "Report", p. 59).

I suggest that you might serve the ends of justice if you reproduced those letters with mine.

J.E.G. Dixon
Dept. of French
University of Winnipeg

Editor's note: *The CAUT requested several Canadian academics with direct knowledge of the Crowe case to comment on Prof. Dixon's account. Their letters follow.* The Bulletin *has carried several features on the Crowe affair at United College including the Fowke-Laskin Report in Jan. 1959, a collection of articles published in the October 1981 issue on the occasion of the death of Harry Crowe and a special insert in the October 1983 issue, "The Good Old Days: a Golden Age of Academic Freedom?"*

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Professor Dixon has obviously done a careful and objective reading of all the available material relating to the Crowe affair. I believe his main conclusion to be quite correct, namely, that academic freedom was not involved in the case. Academic tenure, of course, *was* an issue, and this was recognized by a large majority of the College faculty at the time, evidenced by the fact that they met the Board members on 13 December, 1958, requested the reinstatement of Crowe without conditions, and saw this request affected on 15 December.

It certainly is difficult to disagree with the statement that Crowe was fired (a foolish action by an unthinking Board) because he "imputed improper and false motives to the Principal and...made accusations against him of distortion and grotesqueness," although one might not agree that these are sufficient grounds for dismissal. The Principal, of course, did not intercept, or retain, or disclose, or use to Crowe's detriment the 14 March letter, and Dixon is correct in this. Crowe apparently was led to believe these things were happening (or had happened) and therefore he complained publicly; he was unjustly fired for his action, and the injustice was corrected on 15 December.

There is nothing in the record to indicate that the contents of the 14 March letter were used in any way against him, and I agree that all the available evidence supports the view that the Principal at no time intended to do this, or even permit it to be done. It is important to note that he was not even present on 2 July when the Board initially dismissed Crowe, under the naive assumption that its action was some sort of arrangement and not a firing.

The factual statements in Prof. Dixon's letter are generally well known, are correct, and the published documents support them, except for the assertion that Crowe's dismissal was supported by the College faculty association of the time, and the implication that Professor Stingle also made Blake's removal from the Deanship a condition of his returning. I am not certain that the publication of the Wilson letters would provide significant further insight (I, of course, do not know their contents), apart from suggesting further reasons for Crowe's misconceptions of the situation in May and June.

Those who experienced at first hand the unsettling events of that unhappy year have always been puzzled, and frequently disturbed, by two false assumptions consistently found in the various CAUT accounts. The first of these is that academic freedom was at stake — it clearly was not, and only the most strained interpretation of such freedom could relate it to the case. The second is that the Principal was in some way engaged in nefarious acts — he clearly was not, and this becomes increasingly apparent as the documents are studied and the events reviewed.

Almost everyone agrees that injustice was done to Professor Crowe, trapped in a situation not of his own making. In this regard, the most significant act of the entire affair was the faculty's request that he be reinstated, and the Board's positive response. All other actions, both of the CAUT and the College Board and of individuals, though generally well-intentioned, only served to worsen the situation inasmuch as they deepened the mistrust among individuals; without the mistrust there would obviously have been no affair.

I do wish heartily, as all of us surely do, that some investigator would discover the identity of the interceptor of the letter, the real culprit in the affair — *that* would provide new light indeed.

A.G. Bedford
University of Winnipeg

Editor's note: Prof. Bedford is the author of a history of United College.

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Professor Dixon argues that the "real issue" in the United College case was not that of "freedom of speech or of academic freedom," and that Harry Crowe was "dismissed for legitimate causes." He then presents a highly selective review of the case which, even so, demonstrates that the "legitimate causes" were precisely those which contravened academic freedom and freedom of speech — let alone the sanctity of private communication by mail.

No facts are revealed in Professor Dixon's letter which were not known previously, while his errors and slipshod chronology reiterate the threadbare arguments of those College "loyalists" who were either too timid or too blind to oppose the reprehensible course followed by Principal Lockhart and the Board of Regents. Since it is neither possible, nor particularly helpful, to recapitulate the entire sequence of events (for which the principal source remains the Fowke-Laskin Report published in the *CAUT Bulletin* of January, 1959) I will simply underline, once again, the central issues which Professor Dixon has sought to obscure.

The seventeen people who resigned from United College did so because the Principal and the Board of Regents saw no reason why the opinions expressed in a private letter to a colleague should not be used to hold Professor Crowe to account. How the letter came into Lockhart's hands is of little consequence; what he and the Board did with it is beyond dispute. The official Board statement issued to the *Winnipeg Free Press* (and reprinted as Document 46 in the Fowke-Laskin Report) explains that when Lockhart "received" the letter "he felt himself morally responsible as official representative of the United Church on the board, and as chief executive officer of the college, to retain a copy of it for the board."

Having photocopied the letter for the Board's consideration, Lockhart then wrote Crowe, telling what he had done and declaring his own conclusion that Crowe had "no sympathy with the avowed purposes of the college, and that you have no respect for or loyalty to the administration." Apart from this assessment of his *privately* expressed opinions, could Crowe have felt any sense of academic freedom when "loyalty" to a college administration was made the acid test of tenure?

To argue, as does Dixon, that there is no evidence that Principal Lockhart intended to use Crowe's letter against him is patently ridiculous. The moment Crowe remonstrated to the United Church Board of Colleges about the violation of his right to express opinions privately to a colleague the College Board of Regents informed him that his employment would end in one year's time. When Crowe refused to accept the year's notice, his private letter was read to the Board and he was fired "forthwith." This series of events is also set out quite explicitly in the official statement of the Board of Regents.

Professor Dixon suggests that when Stewart Reid, Richard Stingle and I resigned we already knew what would be in the Fowke-Laskin Report — which was not released until five days later. This is simply snide. It is also an extremely unfair judgement on one of Canada's greatest jurists. Both Vernon Fowke and Bora Laskin were punctilious in the conduct of their investigation and in the presentation of their findings. Equally nasty, but also obtuse, is Dixon's charge that our criticism of Dean Blake arose solely because he was opposed to us. We did, in fact, refuse to remain colleagues of Blake because he fully endorsed the actions of the Principal and the Board of Regents — actions which we took to be lethal with respect to academic freedom and to the yet more crucial rights pertaining to private correspondence.

It has always interested me that discussions of the United

See TO THE EDITOR/6

Director of Student Services

Athabasca University is seeking applicants for a permanent appointment in the position of Director of Student Services.

Responsibilities: Reporting to the Vice-President of Learning Services, the Director of Student Services provides leadership and direction for all University Student Services, directly through the management of the central Student Services unit in Athabasca and indirectly throughout the University's regional network. Student Services provides academic advising, career counselling, personal counselling, learning and study skills, financial counselling, and special needs services via telephone, mail and in-person.

Qualifications: The ideal candidate will have a Ph.D. Degree with at least three years experience as a counselling practioner and three years managerial experience, or a Master's Degree in one of the helping disciplines with at least five years experience as a counselling practioner and three years managerial experience. He or she must be certified or licensed with the appropriate professional body. In addition to the usual leadership and management skills, this position makes unusual demands on the communications skills of the incumbent given the regional nature of the University's operations, and the distance mode of course delivery.

Salary: This position will be of interest to those currently earning in the $45,000 to $50,000 range.

The University is housed in a new, 12,000 square metre building near the Athabasca River, 140 km north of Edmonton. Surrounded by farm land, forest and lakes, the town has a performing arts centre, golf course, swimming pool and curling and skating facilities. Cross-country skiing, fishing and hunting are popular in the area.

Please submit curriculum vitae and the names of three references by October 31, 1985 to:

D.P. Monk, Director of Personnel, Athabasca University, Box 10,000, Athabasca, Alberta T0G 2R0

Athabasca University

The University of British Columbia
School of Rehabilitation Medicine

UBC

FACULTY POSITIONS

Applications are invited for tenure track positions at the rank of Assistant Professor in the Divisions of Physical Therapy and Occupational Therapy at the University of British Columbia. Candidates must be eligible for membership in the Canadian Physiotherapy Association or the Canadian Association of Occupational Therapists, have a doctoral degree, strong research accomplishments, and field experience related to one or more of the following areas: Physical Therapy — neurosciences, adult and paediatric neurology, kinesiology, and exercise physiology; Occupational Therapy — adult and paediatric neurology, rehabilitation technology, vocational rehabilitation and mental health. Academic leadership qualities desirable. Salary will be commensurate with qualifications and experience. In accordance with Canadian immigration requirements priority will be given to Canadian citizens and permanent residents of Canada. Deadline for submission of applications is January 1, 1986. Application, curriculum vitae, and the names of three references should be submitted to:

The Director
School of Rehabilitation Medicine
The University of British Columbia
T106 Third Floor — Acute Care Unit — H.S.C.H.
2211 Wesbrook Mall
Vancouver, British Columbia V6T 1W5
Canada
Telephone: (604) 228-7414

UBC left short of special funds

by Michelle Morrissette
Bulletin correspondent

VANCOUVER: The University of British Columbia is short $3.2 million in its operating budget this year because it received substantially less than it expected from the Universities Council of B.C.

Although, historically, UBC has received 60% of university funding in the province, a recent decision by the Universities Council to allocate most of the remaining funds from a special Universities Adjustment Program to the province's other two universities has left UBC with less than 50% of the total UAP funds.

The decision has left the university in the lurch since it had expected to receive at least a portion of the remaining funds in order to minimize the deficit in its operating budget approved in July.

Since, by law, universities in B.C. cannot operate at a deficit, UBC will be making further cuts this fall to balance its 1985/86 budget.

While it is too early to tell where the cuts will be made, spokesmen here say there will be no further program cuts this academic year. Rather, cuts are likely to come from a continuation of a hiring freeze on positions left vacant, which has been in effect over the past several years, and from a wage freeze on non-salaried workers.

Robert Smith, UBC President pro tem, said he was "bitterly disappointed" with the Universities Council decision.

"I didn't expect to get it all, but not even in my most morbid moments did I ever think we would get nothing," he said.

"UBC is the largest, most complex, most research-oriented, and recognized university in B.C. But these are facts that don't seem to have entered the consciousness of the Universities Council."

The UAP was a special program set up by the provincial government when it cut back university funding by 5% in last spring's budget. The fund, which contained $14.9 million, was to assist in program adjustments within and between the universities, faculty renewal, and for research and instruction in emerging and innovative high priority areas.

UBC short $3.2 million this year in operating budget

Most of the UAP funds have been previously distributed by the Universities Council, but nearly $3.5 million was held back for contingencies. This fall, $2.1 million of the unallocated reserve was released to the University of Victoria and Simon Fraser for engineering expansion, while another $400,000 is earmarked for those areas. A decision on the final $900,000 won't be made until year's end.

BC survey supports universities

by Michelle Morissette
Bulletin correspondent

VANCOUVER: More than two-thirds of British Columbia's lower mainland residents believe that the quality of education at B.C.'s universities is being threatened as a result of government cutbacks, according to a recent opinion poll.

A survey commissioned by the Confederation of Faculty Unions of British Columbia (CUFA) reveals that more than 70% of lower mainland residents disagree with the provincial government decision to allocate less money to universities here. It also reveals that more than two-thirds of the residents here feel that university education is being threatened by cutbacks.

The survey further revealed that the public in B.C. recognizes the value of a university education. Of those polled, almost three-quarters believe that university education in B.C. is beneficial, while 93% agree that any resident in B.C. who is qualified to go to university should be able to go regardless of family income.

"That's as close to a unanimous response as you're ever going to get. I hope that our elected representatives in Victoria and Ottawa are listening," said Gordon Shrimpton, Past President of CUFA, in a prepared statement.

The survey, conducted by United Communication Inc. in July, involved telephone interviews with 609 people, 19 years or older, who have lived in the greater Vancouver regional district for more than a year.

According to results from more than 40 questions on subjects such as government funding, accessibility, quality of education, and tenure, there is a much stronger support for universities and its faculty members than was previously thought.

According to the results:
•66% of those polled said universities should admit more students.
•67% said universities should increase the number of programs they offer.
•62% believe that the quality of education in B.C. is either somewhat or a lot worse than it was three years ago.
•83% agree with the concept that tenure is important to society because it permits professors to criticize government policy.
•54% strongly agree and a further 28% somewhat agree that it is important to society for university professors to be able to criticize government policies as a part of their research without fear of losing their jobs.

Du bureau du premier ministre...

La semaine national des universités, qui doit être soulignée dans tout le Canada, est un événement qui a toute ma faveur.

La viabilité de l'université en tant qu'institution dynamique et progressiste repose d'abord et avant tout sur l'aide que lui apportent les Canadiens. Les universités font depuis si longtemps partie de notre décor que nous finissons par perdre de vue le rôle vital qu'elles jouent dans l'approfondissement de nos connaissances dans les domaines social, artistique et scientifique. Pour maintenir sa place parmi les pays résolument tournés vers l'avenir, le Canada doit veiller à préserver la vitalité et la stabilité de ses maisons d'enseignement postsecondaire.

La semaine nationale des universités offre aux Canadiens une splendide occasion d'explorer les multiples facettes de la contribution universitaire à l'amélioration de notre vie colleactive et à notre enrichissement intellectuel. J'encourage donc tous les citoyens qui s'intéressent à l'avenir de notre pays à participer aux activités inscrites au programme de cette semain.

Brian Mulroney

From the Prime Minister's desk...

It is with great pleasure that I offer my support and endorsement to National Universities Week as it is observed in communities across Canada.

If the university as a dynamic and progressive institution is to remain viable in Canada, it will only be through the support and concern of the Canadian people. Universities have for so long been a part of the national fabric that is possible to lose sight of their seminal role in the cultivation and advancement of social, aesthetic and scientific understanding: yet if Canada is to retain its forward-looking identity in the world community, it is essential that we ensure the vitality and stability of our post-secondary community.

National Universities Week represents a splendid opportunity for Canadians to explore the myriad ways in which our universities enhance the quality of national life, and to contribute to their growth in the years to come. I encourage every citizen interested in our nation's future to participate in the Week's activities.

Brian Mulroney

La puce à l'oreille

par Eric Devlin

"L'université et moi"

Les universités du Québec souhaitent la participation d'un demi-million d'élèves du secondaire à un concours qui a pour thème "L'Université et moi". Ce concours sera la principale activité organisée par la Conférence des recteurs et des principaux des universités du Québec (CREPUQ) dans le cadre de la Semaine nationale des universités qui se déroulera du 19 au 27 octobre prochain.

"Le Québec sera la seule province à organiser un évènement sur tout son territoire" souligne Roland Doré, directeur de l'École polytechnique de Montréal et co-président du comité d'organisation de cette semaine nationale.

Ce concours rejoindra en effet tous les étudiants du Québec puisque chacun pourra y participer dans sa langue d'enseignement: le français, l'anglais, le cri et l'inuktituk!

"Nous voulons donner l'occasion à un demi-million de jeunes de s'exprimer sur la place que l'université occupe déjà dans leur vie et sur le rôle grandissant qu'elle pourra jouer dans leur développement personnel, déclarait David Lloyd Johnston, président de la CREPUQ et principal de l'Université McGill. En les invitant à participer au concours "L'Université et moi", nous leur donnons l'occasion de réfléchir à leur avenir car les choix qu'on demande aux jeunes de faire, dès le Secondaire III, engagent l'avenir."

Apprivoiser l'université

La Conférence des recteurs veut donc éveiller les jeunes à la réalité universitaire et à la contribution des universités au développement et au progrès de la société québécoise. Évidemment ce concours est une forme d'incitation à la poursuite d'études universitaires. Mais comme le souligne Onil Dupuis, porte-parole de la CREPUQ, "l'université est une réalité pour tout le monde, qu'on y aille ou qu'on y aille pas".

Paraphrasant le renard dans le Petit Prince de Saint-Exupéry, *Onil Dupuis reconnait que l'université veut se* faire apprivoiser. "Certains voient l'université comme une tour d'ivoire. D'autres la perçoivent comme une distributrice de diplômes mais peu de monde sait qu'une des fonctions premières de l'université est l'avancement des connaissances".

220 gagnants dans quatre langues

Les jeunes Québécois pourront participer au concours de la CREPUQ de deux façons: ils pourront s'inscrire aux épreuves écrites, en rédigeant un texte dans une des quatre langues reconnues, ou en arts plastiques. Dans le cas des épreuves écrites, les participants n'entreront en compétition qu'avec ceux qui y auront employé la même langue.

Les onze régions administratives du ministère de l'Éducation choisiront les 220 gagnants régionaux qui seront proclamés simultanément dans les huit villes universitaires du Québec le dimanche 20 octobre. Chacun de ces gagnants se méritera une médaille en argent massif du jeune concepteur-joaillier Claude Loranger.

Mais ce n'est pas tout puisque qu'un grand jury provincial choisira les dix meilleurs textes et les dix meilleurs travaux d'arts plastiques. Ces vingt gagnants recevront un trophée également conçu par Claude Loranger. Et ce sera la fête puisque les 220 gagnants régionaux se rassembleront à Montréal du 24 au 27 octobre. Ils iront également passer une journée à Ottawa. Et le 25 octobre on désignera dix gagnants qui se mériteront un voyage à Paris et dix autres iront passer une semaine au centre Epcot en Floride.

L'organisation de ce concours colossal n'a pu être réalisée sans la participation des commissions scolaires et des différentes instances gouvernementales. Les universités ont également obtenu une aide financière de l'entreprise privée pour les déplacements des jeunes, leur hébergement et défrayer une partie des prix.

C'est la deuxième fois consécutive que les recteurs des universités québécoises mènent une action spectaculaire. L'année dernière, la CREPUQ avait nolisé un avion et organisé une tournée des villes universitaires. "On nous avait surnommés les recteurs volants, the flying rectors", se souvient amusé David Lloyd Johnston.

Ce concours n'empêchera pas les universités d'organiser localement d'autres activités mais il est encore trop tôt pour avoir une idée de cette programmation. "Il est certain qu'ailleurs au Canada, certaines universités se sont regroupées pour mener des activités d'envergure locale qui dépasseront celles qui pourraient être mises sur pied au Québec, spécifie Roland Doré. Mais encore une fois nous serons tout de même la seule province à voir aussi grand".

TO THE EDITOR — 4

College case give pride of place to academic freedom and freedom of speech. Each of these was certainly imperilled, but the right of *private* expression of opinion was always at the heart of the matter. Because of this I retain doubts as to whether much use would have been gained through litigation. When I consulted my rector during the peak of the tribulations he put the matter rather succinctly: "No gentleman would read another person's letter without permission." This is not so much a matter of law as of personal conviction. I remain convinced that no "legitimate cause" of dismissal can be found in Harry Crowe's letter which, as far as I am concerned, is still private.

Dr. Kenneth McNaught
Toronto, Ont.

UNIVERSITY HOSPITAL

PH.D. CLINICAL/ADULT PSYCHOLOGY POSITION WITH ACADEMIC APPOINTMENT

University Hospital, a teaching hospital on the campus of the University of Saskatchewan, is seeking a full-time senior clinical psychologist with experience in providing clinical services to adults in health care settings. The position includes clinical, teaching/research and administrative responsibilities.

The candidate must have interest, training and supervised experience in the areas of health and medical psychology. Individuals who qualify will be eligible for an academic term appointment in the Department of Psychology and Psychiatry, University of Saskatchewan. Candidates must be eligible for registration in the Saskatchewan Psychological Association.

Interested applicants should send their resume and, in addition, request that three letters of reference be sent to:

Larry Shepel, Ph.D.
Director of Psychology
Department of Psychiatry
University Hospital
Saskatoon, Saskatchewan
S7N 0X0

Canadian Memorial Chiropractic College

ACADEMIC DEAN

The Canadian Memorial Chiropractic College is currently seeking an Academic Dean.

Candidates must hold a professional degree/diploma in chiropractic or a doctorate in either a health science, basic science, or education.

Experience in a post secondary educational institution is essential and the candidate must be familiar with curriculum and faculty development. Evidence of scholarly activity is required.

The Canadian Memorial Chiropractic College offers a four year full-time course leading to a Doctor of Chiropractic. Applicants must have a minimum of two years of study at a university in Canada or its equivalent. The student body numbers 600 and a faculty of over 100 report to the Dean through seven Divisional Directors. The College has an excellent Library, consisting of 15,000 volumes in the Health Sciences.

Salary range is $55,000 - $65,000, depending upon qualifications and experience. The appointment will commence January 1, 1986 and will be for an initial term of five years.

The CMCC encourages both women and men to apply. In accordance with Canadian immigration requirements, this advertisement is directed to Canadian citizens and permanent residents.

Application and résumé should be sent to:
The Chairman
Academic Dean Search Committee
Canadian Memorial Chiropractic College
1900 Bayview Avenue
Toronto, Ontario M4G 3E6

Closing date for receipt of applications is November 30, 1985.

Briefly...briefly...

Ontario fails universities

TORONTO — A report on the financial position of Ontario universities, prepared by the Council of Ontario Universities research division, provides data which indicates that the province does not give the universities the same priority as health care and other levels of the educational system. The financial data show that Ontario "does not support its university system on a level comparable to that of the remainder of Canada" and the province "does not value the universities as highly as it once did in the past," COU says. Among the many significant findings of the report, entitled, *The Financial Position of the Universities of Ontario: Some Relevant Data*, are the following:

- In 1984-85, the Government of Ontario's operating grant to universities per student was $5,127, compared to $5,959 for the rest of Canada.
- University grants per $1,000 of provincial personal income were $8.17 in Ontario in 1983-84, but on average were $11.72 in other provinces. Ontario ranked tenth in this category.
- Between 1974-75 and 1984-85, net total operating grants increased in Ontario by 141.8 per cent compared to the average 194 per cent increase of the other provinces. Ontario's ranking was again tenth.

Charges against researchers dropped

LONDON — Charges of causing unnecessary suffering to a baboon brought against two researchers at the University of Western Ontario have been dropped. The charges, which were laid by a Vancouver-based group Lifeforce "were groundless and without any real foundation" said an Ontario court judge at the conclusion of the seven-day court case in London in August. The court had been told the baboon — known as Debbie or B-43 — was restrained in a chair-like device for a four-month period between last September 1 and January 2 while Bernard Wolfe, an endocrinologist, and William Rapley, a veterinarian, were conducting cholesterol studies. Lifeforce dropped its charges, said the group's lawyer, after learning the baboon in question would not be used for further research. University officials made it clear, however, that Lifeforce was mistaken in its conclusion that the university had agreed to suspend any further use of restraint devices on research animals.

Order of Canada award

TORONTO — Prof. B. Cinader of the Clinical Biochemistry Department of the University of Toronto was recently elected an Officer of the Order of Canada. Prof. Cinader has for many years assisted CFBS and CAUT in lobbying the federal government on science policy.

Research '86 probes effects of science

HALIFAX — A major cross-Canada scientific lecture series kicked off at Dalhousie University on September 9. "Research Canada '86" will examine the contributions and implications for our world of scientific research and development. The three-day event in Halifax focused on the effects of research and development on human society. "Research Canada '86" will probe similar themes in other Canadian cities before wrapping up with a final overview in Vancouver next September, coinciding with Expo '86. The year-long project will involve scientific experts from across Canada and around the world.

UNB marks 200th anniversary

FREDERICTON — UNB is marking the 200th anniversary of its beginning this year and so has twice the reason to celebrate during National Universities Week. The University is planning several major projects to observe both NUW and its anniversary, including a special bicentennial convocation, an exhibition of the best of UNB's artists, and concerts by the University of Georgia's Brass Quintet. U of G is also celebrating its bicentennial in 1985. In a more strictly NUW project, UNB has teamed up with l'Université de Moncton in sponsoring a write-a-radio-promotion contest for students in grades 9-12 in the province. The 30-second radio promotions will highlight the importance of universities in society or the importance of a university education. The winning promotion in each language will be recorded in a professional studio in Fredericton/Moncton and copies of each supplied to English and/or French radio stations for airing during NUW.

Ban stuck on academic exchanges

MONTREAL — In light of former P.M. Pierre Trudeau's recent month-long tour of the Soviet Union, Canadian scholars are asking why the federal government still won't let them do work there. Since February 1980 when the government protested the Soviet invasion of Afghanistan, professors and graduate students have been blocked from going to the Soviet Union to pursue their studies. The ban has stuck, says Paul Austin, chairman of the Russian studies department at McGill University, even though the U.S., Britain and other Western countries still provide academic exchanges.

"It's a contradiction for our own government to say, 'Tone down the rhetoric' (by the Reagan administration against the Soviet Union) and then not have any exchanges," Austin said.

The situation is especially ironic, he said, because this year is the 10th anniversary of the Helsinki Accords which, among other points, encouraged academic links between East and West.

—From the Canadian Press

Third term for OCUFA's Jones

TORONTO — Dr. Bill Jones, 40, professor of psychology at Carleton University, was re-elected President of the Ontario Confederation of University Faculty Associations (OCUFA) at the Confederation's last Board meeting. This will be Dr. Jones' third term. Dr. Jones, who was born in Liverpool, U.K., in 1945, lectured at the University of London and the University of Queensland in Australia before coming to Canada. He was a visiting assistant professor at the University of Waterloo. He went to Carleton as an assistant professor in 1975; became an associate professor in 1976; and a full professor in July 1982. Dr. Jones became President of OCUFA in July of 1983.

Freedom to Read Week

TORONTO — "Freedom to Read Week", sponsored by the Book and Periodical Development Council, is to become an annual event. The enthusiastic participation of the print and broadcast media in the 1984 event, and the enormous interest on the part of authors, booksellers, publishers, teachers, librarians, and the general public convinced the Council that the Week should be celebrated annually. The theme for 1985 (October 6-13) is "Open books...open minds", focusing primarily on the censorship issue as it affects schools and libraries. The Council is supplying interested groups and individuals with Freedom to Read Week kits, including posters, activity ideas and a list of banned or challenged titles. The CAUT Council is a supporter of the Freedom to Read Week.

THE DEPARTMENT OF FAMILY MEDICINE
DALHOUSIE UNIVERSITY

New Position: Coordinator, Behavioural Science Program

The successful applicant will have a degree in the behavioural sciences and be responsible for the further development and conducting of teaching programs to medical students (residents, undergraduate and postgraduate students) in Family Medicine. The applicant will demonstrate proven teaching experience and research interest preferably in a medical environment. In addition, the applicant will be expected to provide a limited clinical service.

This will be a faculty position in the Faculty of Medicine with salary according to rank. Dalhousie University is an equal opportunity employer.

Written applications may be directed to:
Head, Department of Family Medicine
5599 Fenwick Street
Dalhousie University
Halifax, N.S.
B3H 1R2

IN/PRINTS (Information was supplied by the publisher.)

CANADIAN MULTINATIONALS, Jorge Niosi, between the lines, Toronto, 1985. A book which measures the extent of Canadian direct investment in foreign countries, and examines 13 multinational companies in the utilities, mining and manufacturing sectors. The author teaches at the University of Quebec.

WINNING THE PH.D. GAME: How To Get Into And Out Of Graduate School With a Ph.D. And A Job, Richard W. Moore; Dodd, Mead & Co. New York, 1985. From getting into graduate school to "turning your dissertation into a job," this book is a general guide to the career needs of Ph.D. candidates. Richard Moore is a research consultant in Los Angeles.

New UBC President David Strangway sees hope for B.C.'s universities

by Michelle Morissette
Bulletin correspondent

The man appointed to guide the University of British Columbia through one of the most critical periods in its history says he is very hopeful about the future of universities in B.C.

David Strangway, 51, one of Canada's leading geophysicists, who has served as both Vice-President and President of the University of Toronto, has been appointed President of UBC starting in November. He will replace Acting President Robert Smith.

In an interview from his office in Toronto, Dr. Strangway said that, while he is fully aware of the difficulty of his job at UBC, he is still very optimistic about the university picture in B.C.

"There is no question that the big issue right now is the relationship between government and the university, but I have every reason to hope that this will be improving," he said.

"Prior to my accepting the job I talked to the B.C. Premier and the Minister of Universities and I saw clear signs of hope. While I did not get any clear commitments, I thought their views were very positive and I was encouraged by their general attitudes."

"As well, in the broader context, I see an increasing national and international awareness of the importance of universities. This increasing public awareness can't help but affect the government in B.C. as well within the near future."

For the past several years universities in B.C. have been reeling under a succession of provincial funding cutbacks — this despite increased federal transfer payments — and last spring former UBC President George Pedersen resigned his job, saying the government had made it impossible for him to continue providing strong leadership.

A month after Dr. Pedersen's departure the province announced a further five per cent cutback, and under the leadership of Acting President Robert Smith, UBC has had to bring in measures to cut programs and lay off both faculty and support staff.

As things stand now, with total funding cuts for the 1985-86 year still uncertain, further cuts still loom and morale at the university is at an all-time low.

While aware that he may have to make difficult decisions immediately upon his arrival at UBC, Dr. Strangway said his chief commitment was to excellence and his major objective would be to ensure that the university remained an outstanding institution, preserving its advantage in scholarship, research and teaching.

"What is so exciting about UBC is that it has the basic gut resources of talented people that is worth fighting for and I am extremely interested in fighting to preserve this," he said.

"Whether constraints prove insurmountable, I don't know until I take on the intricacies of the job. But I do believe that the national and international view has turned around and the province is sure to follow.

While he does not believe that more than the average number of quality people are leaving B.C. universities for greener pastures, Dr. Strangway said he would like to ensure that UBC will be able to attract equally bright stars in return.

"Mobility is beginning to increase now that the financial picture in the U.S. and at other Canadian institutions is looking brighter, and B.C. is going to have to become more attractive to some of those people from the outside," he said. "We're going to have to make the salary situation and the working environment here more attractive and that is going to be a challenge."

While refusing to discuss his views on specific subjects such as tenure and layoffs at this point, Dr. Strangway did stress that he was strongly committed to the issue of university autonomy.

"I feel very strongly about university autonomy. The people who can and should be making the decisions about what happens within a university are the people who are closest to it, the people who are within the disciplines," he said. "I received a very strong assurance from the Premier that he believed in autonomy at the university level."

He further added that his personal style has involved going to bat for the university using several different approaches, in stages. An important one is to have frequent conversations with members of parliament and cabinet members so that they could obtain insight on the issues.

Although Universities Minister Pat McGeer has strongly indicated he wants to see smaller, academically tougher universities in B.C., as well as a five year academic plan stressing a modest reduction, Dr. Strangway said he didn't think quantity and quality were mutually exclusive.

"When you reduce your size, you reduce your tuition fees and transfer of payments, and it doesn't necessarily follow that you are anywhere ahead," he said.

"If you can do both, bring in shrinkage and expansion, bringing in high quality programs, then there is a possibility for positive change."

"Long range planning is fine, as long as it includes renewal through new programs or research fellowships or opportunities to bring in new, bright people who provide excitement and stimulus. But, if it only means looking at long term budget cuts for early retirements, then it is of no value."

"If you are going to get into priority planning then it should involve remaining where the action is within all the disciplines, not weighing one versus the other, for example classics versus computing science." Given the particular B.C. situation, in which increased federal transfer payments to post-secondary education have not been passed on to the universities, Dr. Strangway indicated that he would like to see an increased federal presence in universities here.

"This could possibly be on the research side and is a matter that bears looking into, but there is no question there is a need for more provincial accountability."

Dr. Strangway served as President of the University of Toronto for one year from September 1983 to September 1984, following the sudden death of President-Elect D.F. Forster.

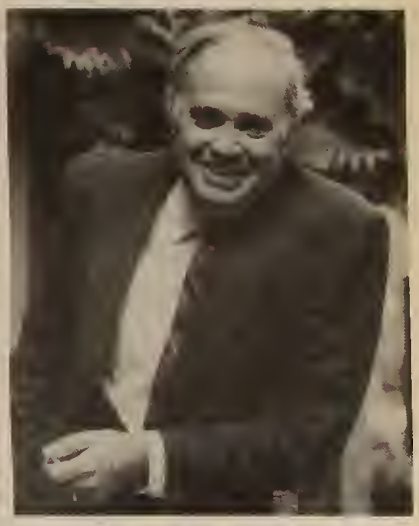
For three years prior to his appointment as President, he was Toronto's Vice-President and Provost, a role in which he served as the university's chief academic officer.

During his term as Provost and President, Dr. Strangway was responsible for a number of initiatives related to ensuring that high standards of scholarship and teaching were considered when new appointments or promotions were made. He also developed new policies on teaching evaluation and emphasized the use of periodic departmental reviews to ensure quality and focus attention on problem areas.

Dr. Strangway was committed to wide consultation with the University of Toronto's administrative officers and students. In spite of financial difficulties, he initiated new academic opportunities, including the creation of the Canadian Institute for Theoretical Astrophysics.

A number of University of Toronto units, including the Innovation Foundation and the famed University of Toronto Press, were put on a firm financial footing during his presidency. He also appointed a university officer responsible for women's issues and a presidential advisor on French at the University.

He maintained close liaison with Ontario industrial firms and with governments at the civic and provincial levels.



THE GLOBE AND MAIL

UBC President-elect David Strangway

CAUT urges government not to ignore humanities

The Canadian Association of University Teachers has urged the federal government not to neglect funding for the humanities and social sciences in Canada.

In its September 9 report to the federal government on university research, the Association said it would regard as "folly of the first order" any attempt on the part of the government to divert funds from the humanities and social sciences to other research areas in an effort to cut costs.

The CAUT said the proposed five-year plan of the Social Sciences and Humanities Research Council clearly shows the importance to Canada of the practical and applied research funded by the Council. Such research areas include the study of foreign countries, economic trade and development, labour relations, law, and business management.

"It is obvious that many of the problems of economic development cannot be solved simply by inventing a new machine," the Association noted.

The study of business management, labour relations, commercial and industrial law, productivity and the like — all social sciences — are an essential part of any industrial policy, and it is unlikely Canada will develop effective international competitiveness without research in these areas, the report concluded.

The CAUT pointed out, however, that this was not the only reason for supporting the humanities and social sciences.

"It has always been widely recognized that education in the free world should be illuminated by an understanding of the western intellectual, philosophical and moral tradition," it said, noting recent widespread calls for a return to basic educational values through the study of both the humanities and the sciences.

The Association said it would be looking to the fate of SSHRC's five-year plan as an indication "to Canadians of the commitment of the Government of Canada in this area."

H.B.

IN/PRINTS

Books received by The Bulletin. Unless otherwise noted, information was supplied by the publisher. Some books may be reviewed later.

ORGANIZATION: Insights From The Behavioural Sciences, ed. by James L. Bess, New York University Press, 1984. Nine papers view college and university organization from the perspective of general organizational behavior, including such topics as "Motivation Research Versus the Art of Faculty Management" and "Job Satisfaction and Role Clarity Among University and College Faculty." The author teaches at New York University.

SEEKING A BALANCE: University of Saskatchewan, 1907-1982, Michael Hayden, University of British Columbia Press, Vancouver, 1983. A history of the University of Saskatchewan since its founding 75 years ago. The author regards its uniqueness as being in danger of destruction by the actions of politicians, administrators, and faculty whose motives are understandable, but who often do not realize the context of their actions. Michael Hayden teaches at the University

Université d'Ottawa
University of Ottawa

CHAIR OF CELTIC STUDIES

The Faculty of Arts of the University of Ottawa invites applications to fill the new Chair of Celtic Studies commencing May 1 or July 1, 1986, at the level of Associate or Full Professor.

Qualifications required: Ph.D., teaching experience and published research in Celtic languages, literatures and folklore, and an active interest in the Celtic communities of Canada. In addition the successful candidate will have a fluent command of both Scottish and Irish Gaelic and qualifications in either Welsh or Breton. The University of Ottawa is a bilingual institution and preference will be given to candidates able to teach in both English and French.

In accordance with immigration requirements this advertisement is directed to Canadian citizens and permanent residents.

Closing date for applications: November 1, 1985.

Send curriculum vitae with names of at least three referees to:

Dr. Marcel Hamelin,
Dean of the Faculty of Arts
University of Ottawa
Ottawa K1N 6N5, Ontario

La tâche des professeurs: un modèle d'analyse

Deuxième Partie

par Philippe Barbaud et Claire Gélinas-Chebat

La tâche des professeurs d'université se prête mal à une évaluation objective en termes de quantité de travail. Pourtant les pressions se font de plus en plus grandes pour "accroître la productivité du corps professoral." (Extrait de la clause 10.29 de la convention collective S.P.U.Q./ U.Q.A.M. en vigueur jusqu'en février 1986.) Nous avons présenté hrièvement dans une première section (voir Le hulletin de l'ACPU, Sept. 1985), le modèle théorique et descriptif de la tâche qui est préconisé dans le rapport Barbaud (1983) intitulé *Le métier d'universitaire*. La seconde section consistera à montrer que plusieurs mesures statistiques à caractère officiel ne sont pas adaptées au rôle qu'on prétend leur faire jouer en les utilisant dans un hut d'évaluation de la tâche professorale.

Philippe Barbaud

Claire Gélinas-Chebat

Dans cette seconde section, nous illustrerons à l'aide de quelques exemples patents, le caractère abusif de certaines procédures technocratiques qui consistent à emprunter aux théories du financement de l'éducation supérieure plusieurs outils de travail qui se voient du même coup investis du pouvoir de mesurer la tâche professorale.

Les effectifs professoraux et étudiants

Le modèle que nous préconisons est accompagné du souci de coller à la réalité de la tâche professorale. C'est pourquoi nous contestons la catégorisation pré-établie des ressources humaines et des effectifs telle qu'on peut la retrouver dans un document comme *Caractérisation des masses salariales* du ministère de l'Education du Québec. Dans la mesure où l'emploi est une fonction du temps et de l'effort de chaque individu, nous soutenons que les seules mesures valables de la tâche doivent correspondre à des *per capita* professoraux et non à des unités proprement comptables telles que l'E.E.T.C. (l'étudiant équivalent à temps complet) ou le P.E.T.C. (le professeur équivalent à temps complet). C'est la raison pour laquelle nous avons retenu comme données de base parallèles aux données officielles celles qui concernent les professeurs "en exercice" et les étudiants "inscrits". Ce sont ces données dont le tableau (I) fait état. Les exigences de l'empirisme ne laissent pas d'autre choix que celui de s'en remettre à des individus réels et non fictifs.

L'encadrement

L'un des indicateurs le mieux connu est sans l'ombre d'un doute le fameux "ratio d'encadrement" étudiants/ professeur mentionné à la ligne VI du tableau (I). Du point de vue du métier de l'universitaire, une telle relation risque d'être abusive parce qu'il est monnaie courante de la formuler en prenant comme unité de mesure le fameux E.E.T.C. dont on se sert pour calculer le montant *per capita* étudiant de l'allocation financière gouvernementale aux universités.

Mais si l'on veut se faire une idée plus réaliste de l'encadrement comme partie intégrante de la tâche, nous devrions considérer plutôt les étudiants comme des êtres en chair et en os et non comme les créatures comptables d'une *clientèle* qu'il faut financer. Il en est de même des professeurs: la charge d'emploi professoral liée à l'encadrement est une fonction de l'effectif des professeurs en exercice au cours d'une année donnée, ce qui exclut à toute fin pratique les professeurs en congé et ceux qui assument temporairement certaines responsabilités administratives.

En gans, l'accroissement de l'effectif des professeurs en exercice a été globalement de l'ordre de 13% à raison d'une variation annuelle moyenne de 1.5% tandis que celui de l'effectif des professeurs réguliers a été de l'ordre de 20% à raison d'un taux de variation annuelle moyen de 2.3%. Ces considérations nous amènent ainsi à effectuer une double mesure de l'*encadrement* à partir des quatre effectifs considérés dans le tableau (I) couvrant presque la décennie 1972-1982. Le rapport per capita professoral fournit alors dans un cas, un *ratio d'encadrement* et dans l'autre, un *indice d'encadrement* présenté à la ligne VI du tableau. Comme on peut s'en rendre compte, l'indice et le ratio obéissent à la même tendance à la hausse:

Mais la perspective change radicalement: il n'est pas indifférent aux yeux de l'opinion publique et des professeurs eux-mêmes que l'on parle de leur métier en termes d'encadrement de 29 étudiants plutôt que de 16 E.E.T.C. parce que l'évolution de l'indice et celle du ratio ne sont pas parallèles. D'une part, l'accroissement global de l'indice a été de 59% en gans contre à peine 25% pour le ratio. D'autre part, ainsi que le révèle l'écart issu du rapport "indice/ratio" (ligne VII), il existe un décalage qui s'est accru selon un taux moyen annuel de +4.9% depuis 1972. En effet, la variation annuelle de l'indice est de 5.9% tandis qu'elle n'est que de 2.9% pour le ratio. La variation annuelle moyenne est calculée comme suit: V = (N Td/Tp) - 1 où: N est égal au nombre d'années — 1, TP = donnée de la première année et Td = donnée de la dernière année.

Il appert en conséquence que le seul usage du ratio d'encadrement s'avère insuffisant et inadéquat à rendre de compte de la tâche professorale dans la mesure où une telle unité de quantification entraîne une sous-estimation du fardeau de l'emploi du métier d'universitaire. Une telle constatation se voit renforcée par les tendances que révèlent deux indices supplémentaires.

Le premier indice nous est fourni par le rapport établi entre le nombre d'étudiants inscrits (ligne I) et le nombre d'E.E.T.C. (ligne IV). En 1972/73, ce rapport était de 19%; en 1976/77, il était passé à 34.6% et en 1980/81, il se situait à 42.3%. La progression est donc fortement accentuée au cours de ces huit années.

Le second indice quant à lui nous est fourni par le rapport établi entre le nombre de professeurs en exercice (ligne II) et le nombre de professeurs réguliers (ligne V). En 1972/73, ce rapport était de 2 points supèrieur au précédent pour la même année, soit 21.5%; en 1976/77, il accusait dix points de retard sur le précédent puisqu'il était de 24%; et en 1980/81, l'écart accusait 13.3 points de différence puisque ce rapport se chiffrait à 29%.

Ainsi donc, la faible augmentation des ressources professorales conjuguée à la forte augmentation du nombre des étudiants à temps partiel a entraîné au cours de ces années une diminution de la disponibilité des professeurs ainsi qu'une pression croissante sur la charge d'emploi des professeurs en exercice qui doivent quand même répondre aux besoins de tous les étudiants.

Il faut avouer cependant qu'on ne peut à la fois revendiquer le maintien ou même la diminution des indicateurs d'encadrement et profiter d'un accroissement spectaculaire du nombre de professeurs en année sabbatique. Mais c'est là une tout autre dialectique qui déborde la seule question de la tâche. Quoi qu'il en soit, une description adéquate et réaliste de celle-ci doit pouvoir incorporer une double mesure de l'encadrement basée sur l'indice et le ratio car il convient de toujours pondérer l'évaluation théorique de la première par l'évaluation empirique de la seconde.

L'enseignement et son crédit

Comment maintenant la notion de "crédit" permet-elle de rendre compte de l'aspect quantifiable du travail professoral impliqué par l'enseignement? Le tableau (2) suivant fournit un élément de réponse. Sur les lignes, I, II et III, on mentionne pour chaque année concernée les trois types de données brutes relatives aux activités d'enseignement du réseau universitaire québécois qu'il est loisible d'obtenir par les voies "normales" d'accès à l'information publique.

De ces données brutes, on peut dire en premier lieu que celles qui ont trait du nombre de crédits (ligne III) sont révélatrices d'un phénomène intéressant à savoir la vigueur de la croissance entre 1972/74 suivie d'un plafonnement autour de 105 000 crédits octroyés par année depuis cette époque. A la ligne IV du même tableau, on peut observer en second lieu la croissance rapide au début mais moins prononcée par la suite de la taille de chaque groupe-cours. Une telle croissance découle directement d'une augmentation de 19.6% en 8 ans à raison d'une variation annuelle moyenne de 2.3%. Celle-ci est donc équivalente à celle du corps professoral mais supérieure à celle de l'effectif des professeurs en exercice qui n'est, rappelons-le, que de 1.5%.

Les quatre lignes suivantes fournissent deux autres mesures de l'enseignement en fonction du type de per capita professoral considéré. On constate alors que si le nombre de 4 cours-année par professeur régulier fait montre de stabilité au cours de ces huit dernières années, en revanche le nombre de cours-année par professeur en exercice a toujours eu tendance à se situer au-dessus de 5 (ligne VI).

On constate en dernier lieu la tendance à la hausse du nombre de crédits octroyés par chaque professeur régulier (ligne VII), tendance qui est visiblement plus accentuée à la ligne (VIII). En effet, la charge d'emploi reliée à l'enseignement effectif est l'équivalent de presque 17 crédits-année par professeur en exercice soit 5 crédits "bénévoles" de plus que les 12 pour lesquels il est contractuellement rémunéré.

Telle est la différence entre la mesure de l'enseignement "effectif" et celle de l'enseignement "comptable". On peut donc soutenir, en conclusion, que l'augmentation de la tâche d'enseignement des professeurs était, en 1981-1982, une réalité dûment vécue.

La mesure de la recherche

La productivité des pro-

A discussion of the job/role of university professors as teachers, researchers and contributors to the social well-being of the community. The authors comment critically on certain analytical models used by the Quebec government to rationalize the professor's role. They contend that the three aspects of the professorial job/role are closely interconnected, with the student as focal point of all activities, and press for a realistic assessment of that role. This is the conclusion of a two-part article which began in September.

TABLEAU I

La double mesure de l'encadrement évolution de 1972/73 a 1981/82 dans les universites du Québec

		1972/73	1974/75	1976/77	1978/79	1980/81	$\Delta = \frac{1980\text{-}81}{1972\text{-}73} - 1$
I	nombre d'étudiants inscrits	101 751	128 566	144 635	162 786	182 765	80%
II	nombre de professeurs en exercice*	5 535	5 914	6 182	6 289	6 245	13%
III	A) INDICE D'ENCADREMENT	18.39	21.74	23.40	25.88	29.27	59%
IV	nombre d'é.é.t.c.	85 073	92 934	107 471	121 323	128 432	51%
V	nombre de professeurs réguliers**	6 725	7 103	7 663	7 845	8 094	20%
VI	B) RATIO D'ENCADREMENT	12.65	13.08	14.02	15.46	15.86	25%
VII	$ECART = \frac{A - B}{A} \times 100$	31.2	39.8	40.0	40.2	45.8	47%

*Pour les années manquantes, les données peuvent être obtenues chez les auteurs.
**Cet effectif ne comprend ni les professeurs en congé sabbatique et en congé d'études ni le personnel de direction (enseignement et recherche).
***Cet effectif comprend tous les professeurs considérés comme tels par le M.E.Q.

Sources: *Bulletins statistiques* 82-04, 83-02 et compilation spéciale.

QUI A BESOIN D'UNE UNIVERSITÉ?

PHOTO — JIM BANHAM

Tour d'ivoire?

Une université, c'est une collectivité de personnes qui se réunissent pour enseigner et pour s'instruire. Ce n'est pas simplement un ensemble de bâtiments, de livres et de laboratoires que des arbres et des boulevards séparent du reste du monde.

Les universités vous appartiennent à vous, les contribuables du Canada. Ce sont des lieux publics et vous pouvez les visiter en tout temps.

Qu'allez-vous trouver dans votre université? A quoi sert-elle? En 1984-85, les contribuables ont maintenu quelque 70 universités dans l'ensemble du Canada. Qu'est-ce que votre investissement vous a valu?

Avant de pouvoir répondre, il faut se rappeler que les universitaires font encore partie de la société même lorsqu'ils travaillent ou étudient dans leur université particulière. Ils contribuent directement à l'économie, aux arts et aux sciences ainsi qu'à la vie de la collectivité extérieure. Sans nos universités, nos collectivités seraient des lieux fort différents.

Un luxe couteux?

L'enseignement est un investissement. En 1984-85, les frais de fonctionnement des universités et collèges au Canada ont coûté 5,285 millions au contribuable[1]. Les chiffres de chacune des provinces sont présentés au tableau 1.

En investissant dans les universités, nous n'investissons pas dans des personnes. Plus précisément, nous investissons dans du savoir, des compétences, des arts, des sciences et de la technologie. Les avantages que nous valent ces investissements sont très réels, bien qu'il soit difficile de mesurer scientifiquement ce rendement.

Comment mesure-t-on ce que rapportent le savoir-

Qui a besoin d'une université est une publication spéciale de l'Association canadienne des professeurs d'université pour célébrer la semaine nationale des universités.

TABLEAU 1

SUBVENTIONS PROVINCIALES DE FONCTIONNEMENT VERSÉES AUX UNIVERSITÉS ET AUX COLLÈGES POUR 1984-85

Province	Subventions (en milliers du dollars)
Terre-Neuve	91 033
Ile-du-Prince-Edouard	19 686
Nouvelle-Écosse	159 541
Nouveau-Brunswick	117 695
Québec	1 844 006
Ontario	1 691 185
Manitoba	172 473
Saskatchewan	187 019
Alberta	539 509
Colombie-Britannique	462 269

Source: Johnson, A. voir référence.

faire de l'infirmière et du médecin ou les talents du musicien et du mathématicien? Comment se mesure ce que rapportent un poème ou un tableau? Le rendement de ces investissements ne peut se mesurer en argent seulement. Cela ne signifie pas, cependant, qu'il n'y a pas de rendement.

Le rendement que nous obtenons nous entoure au moment même où vous lisez ces lignes. La voiture que vous conduisez a été construite d'après les plans d'ingénieurs; ces derniers se sont formés dans des universités et ont reçu de physiciens, de chimistes et de mathématiciens une bonne partie de leur savoir. La maison que vous habitez n'aurait pu se construire sans le concours des ingénieurs, des scientifiques et des gestionnaires embauchés par les nombreuses sociétés qui ont fabriqué les matériaux dont est faite la maison. Plusieurs des personnes qui vous fournissent les nouvelles et les distractions que vous trouvez dans les journaux ou à la télévision ont appris leur métier, leur savoir et leur journalisme dans nos universités.

En investissant dans les universités, nous investissons dans du savoir, des compétences, des arts, des sciences et de la technologie.

Les médecins et les infirmières vous donnent des soins de santé, mais ils ne pourraient rien faire sans le savoir du biochimiste, du biologiste, du psychologue et du pharmacien, tous formés dans nos universités. A l'école, des maîtres dont le savoir vient d'universitaires — historiens, sociologues, politicologues, philosophes et scientifiques — instruisent vos enfants et petits-enfants.

La croissance économique dépend de plus en plus du progrès et des innovations technologiques et d'une main-d'oeuvre hautement qualifiée. C'est pour cela que, au cours des deux dernières années, l'Etat de la Californie a accru de plus de 37% ses contributions financières à l'Université de la Californie et au système universitaire de la Californie.

C'est pour cela que les Etats-Unis envoient 33% de leurs diplômés du secondaire dans les universités ou collèges. C'est pour cela que le Japon envoie plus de 63% de ses diplômés du secondaire dans les universités, collèges, instituts de technologie, écoles professionnelles et écoles des beaux-arts[2].

Au Canada, nous envoyons moins de 24% de nos 18-24 ans au collège ou à l'université et nous investissons environ 2.1% de notre P.n.b. dans l'enseignement postsecondaire, ce qui est beaucoup moins que notre grand partenaire commercial, les Etats-Unis[3]. Le Trésorier de la province d'Ontario a déclaré dans un rapport de 1984 qu'une des raisons de la plus grande productivité des Etats-Unis tenait à leur plus forte proportion de diplômés de l'enseignement postsecondaire[4].

L'enseignement est un investissement

L'investissement dans des métiers de la population active a beaucoup contribué à la croissance économique dans le passé. Ainsi, par exemple, l'élévation du niveau d'instruction des travailleurs du Canada entre 1926 et 1956 "a concouru directement à ce que le taux d'augmentation du PNB soit...plus élevé qu'il ne l'aurait été autrement[5]. En argent, cela a ajouté près de 750 millions à l'économie canadienne en 1985.

Aux Etats-Unis, on a estimé que plus de 40% de la croissance de la productivité par travailleur entre 1929 et 1957 a tenu au développement de l'instruction[6]. Ces avances auraient été impossibles sans les chercheurs formés dans les universités.

Vous bénéficiez réellement des capacités et des connaissances de l'ensemble de la population active. Certains de ces capacités et de ces connaissances viennent de l'école secondaire et du collège technique. Elles viennent aussi, cependant, de façon bien particulière des universités où les maîtres du secondaire et les professeurs de collège ont acquis leurs connaissances.

La croissance économique exige une population active qualifiée ainsi que des gestionnaires, des scientifiques, des technologues et des économistes capables d'agir en association — et en concurrence — avec des gens semblables dans d'autres pays. Nous nous reposons sur eux du soin de prendre de sages décisions fondées sur une vaste compréhension de notre société et de ses racines. Nous investissons dans les universités et ces personnes sont le rendement de notre investissement.

"Les jeunes ont besoin d'emplois — non pas de livres!"

Nos enfants, même sans aller à l'université, bénéficient de la croissance économique à laquelle contribue l'enseignement.

Nos jeunes gens, s'ils vont à l'université, seront mieux en mesure de trouver un emploi. Ils auront une meilleure chance de trouver un emploi bien payé et intéressant.

Le jeune titulaire d'un grade universitaire ou d'un diplôme de collège est moins susceptible, cependant, de chômer. Au Canada, en 1983, seulement 5.2% des diplômés d'université figuraient parmi les chômeurs officiels; seulement 8.9% des diplômés de collège chômaient. Cependant, 13.9% des diplômés du secondaire étaient sans emploi[7]. Compte tenu du chômage "planifié" des gens qui changent d'emploi, le diplômé du secondaire est plus de huit fois plus susceptible de chômer que le diplômé d'université.

Selon le recensement de 1981, les Canadiens pourvus d'un grade universitaire gagnaient $22,995 par année en moyenne. Le revenu moyen des personnes sans formation universitaire était de $12,328 par année[8].

Dans l'avenir, les chances d'obtenir un emploi satisfaisant, sinon simplement un emploi, dépendront de plus en plus du degré d'instruction. Le tableau 2 montre que les emplois exigeant une formation universitaire ou collégiale ont augmenté beaucoup plus rapidement au Canada dans les années 70 que les autres emplois. Ces emplois existent surtout pour une minorité des Canadiens, mais une minorité grandissante.

TABLEAU 2

CROISSANCE DE L'EMPLOI AU CANADA, 1971-1981

Catégorie d'emplois	Hausse en %
Sciences sociales, droit et services	139%
Gestion, administration et finances	119%
Sciences, génie	72%
Médecine et santé	59%
Cols blancs*	52%
Enseignement	40%
Cols bleus**	34%

* Les emplois de bureau et le secteur des ventes surtout
** Les services, l'agriculture, les pêches, l'usinage, les industries de fabrication et de transformation, l'exploitation minière, la construction, les transports.
Source: Publication de Statistique Canada no 92-920

Voici ce qu'a écrit récemment Dian Cohen dans le *MacLean's:*

> Le choix qui confronte les Canadiens est d'hypothéquer l'avenir pour creuser des fossés ou pour utiliser nos cerveaux. Il est crucial d'accorder au moins autant d'importance aux grands travaux fondés sur le principe de l'âge de l'information que les hommes sont la richesse de l'économie qu'aux travaux encore liés à la conviction de l'âge industriel que les ressources naturelles vont nous rendre riches[9].

Qu'est-ce que ça vaut à mon patelin?

Le gros de l'argent des universités se dépense dans l'économie locale. Les employés des universités elles-mêmes se procurent dans la collectivité locale une grande variété de biens et services. L'exemple suivant de Fredericton (N.-B.) montre bien quel en est l'impact[10].

Il y a environ 6,000 étudiants à plein temps à la section de Fredericton de l'Université du Nouveau-Brunswick. En 1981-82, les étudiants y ont dépensé plus de 23 millions. L'Université attire beaucoup de visiteurs et de conférences. Cette même année, les visiteurs ont totalisé plus de 25,000 jours-visiteurs et dépensé près de

deux millions. En 1981-82, l'Université a été à la source d'une dépense d'au moins 60 millions. L'"effet multiplicateur" — l'augmentation encore du revenu de la collectivité du fait de la dépense à nouveau de chaque dollar — a ajouté une autre tranche de 54 millions à ce montant.

L'impact économique total de l'Université a avoisiné $2500 par résident de Fredericton cette année-lá. Les emplois directement ou indirectement liés au fonctionnement de l'Université sont plus nombreux que les emplois de n'importe quelle autre entreprise ou de tout autre établissement de la ville, sauf le gouvernement provincial. C'est la même chose dans beaucoup d'autres collectivités universitaires du pays.

"Les étudiants se la coulent douce"

Les gens s'imaginent parfois que les étudiants se la coulent douce, que leur tâche est relativement facile et que les professeurs sont moins exigeants que déjá. En 1983, les étudiants ont payé seulement 14.9% des frais de fonctionnement généraux des universités canadiennes par leurs frais de scolarité. Est-ce donc qu'ils vivent aux dépens du contribuable? Pas du tout[11].

Les étudiants se disputent, et âprement, les grades. L'accès au premier grade exige entre trois et cinq ans de dur travail au Canada et les normes à atteindre sont élevées. Beaucoup d'étudiants décrochent avant d'avoir obtenu leur grade.

Souvent, le B.A. ou le B.Sc. ne sont que le commencement. Les étudiants peuvent entreprendre des études supérieures en pédagogie, en génie, en administration commerciale, en droit, en médecine, en informatique ou dans d'autres domaines des arts et des sciences. L'inscription à ces enseignements est fort disputée, ce qui est une raison pour laquelle les étudiants cherchent tellement à obtenir de hautes notes dans leurs études du B.A. ou du B.Sc. Le chômage augmentant ces dernières années, la concurrence s'est accrue parce que les étudiants savent que leurs notes comptent pour beaucoup dans leurs chances futures d'emploi. Ceux qui enseignent dans les universités savent que la besogne de l'étudiant est lourde et que la tension y est grande.

Un professeur de l'Université de Victoria, en Colombie-Britannique, a fait enquête auprès de 110 étudiants de trois classes d'histoire en 1984 pour déterminer combien d'heures ils consacraient à leur cours. La plupart consacraient huit heures et plus par semaine à un cours. L'ensemble de leurs études devait exiger aux moins 40 heures par semaine. Environ 20% d'entre eux besognaient 50 heures et plus par semaine[12]. Ils n'avaient aucune raison d'exagérer puisque leur réponse était anonyme.

Il faut aussi se rappeler que les étudiants ne touchent pas un salaire pour faire leur besogne. Ce sont des travailleurs adultes qui acceptent de remettre un salaire à plus tard afin d'acquérir une formation qui leur est profitable à eux et au public.

"Les professeurs se la coulent douce!"

Un professeur d'université est un professionnel dont la fonction est d'enseigner et de faire de la recherche.

Pour devenir professeur d'université, il faut passer plusieurs années à l'université à acquérir une formation spécialisée comme chercheur dans un domaine particulier du savoir. Il faut d'abord obtenir un très bon baccalauréat ès art ou ès sciences. Il faut ensuite demander à s'inscrire à des études supérieures dans son domaine de connaissances. Celui qui est accepté doit normalement préparer une maîtrise qui peut exiger une, deux ou même trois années. Il faut ensuite s'inscrire à une université pour préparer un grade supérieur, soit le doctorat. Ce grade exige d'ordinaire de trois à cinq ans. Seuls les chercheurs les plus prometteurs sont admis à préparer ce grade. Le candidat au doctorat doit réussir à une série d'examens relatifs à son domaine et faire ensuite de la recherche avancée. Il rédigera une thèse fondée sur ses recherches que des experts de l'université et de l'extérieur examineront. D'habitude, l'étudiant doit "soutenir" sa thèse dans le cadre d'un examen public. Si le jury d'examen est convaincu que la thèse répond aux normes requises, le doctorat est alors conféré à l'étudiant.

Beaucoup de personnes pourvues d'un doctorat trouvent à travailler dans l'industrie, au gouvernement et dans les services. Le doctorat permet de demander un emploi comme professeur d'université, mais seulement les meilleurs chercheurs sont engagés.

Le nouveau professeur est d'ordinaire mis en probation, habituellement durant cinq ou six ans, soit un des stages probatoires les plus longs qui soient au Canada. Beaucoup n'y survivent pas, parce que leur enseignement est jugé inadéquat ou faute d'avoir publié assez de recherches. Dans la plupart des départements des universités canadiennes, les étudiants présentent une évaluation des cours et de l'enseignement de leur professeur. Les collègues et les administrateurs du professeur examinent ces évaluations et les augmentations de salaire dépendent d'ordinaire en partie d'un bon enseignement.

Après le stage probatoire, le professeur est évalué par des gens de sa discipline et par les administrateurs de l'université. L'avancement et les augmentations de salaire dépendent de ces évaluations.

Entre le début de septembre et la fin d'avril, les professeurs consacrent probablement la moitié au moins de leur temps à enseigner. Ils passent environ neuf heures par semaine en classe; ils doivent préparer des cours (un cours d'une heure peut exiger plusieurs heures de préparation), corriger des compositions, examens, rapports de laboratoire et autres travaux de leurs étudiants, consacrer plusieurs heures par semaine à conseiller individuellement des étudiants, assister à des réunions et faire de l'administration. En outre, les professeurs doivent continuer de faire de la recherche et d'écrire des textes parce que la création de connaissances nouvelles constitue la tâche essentielle du professeur.

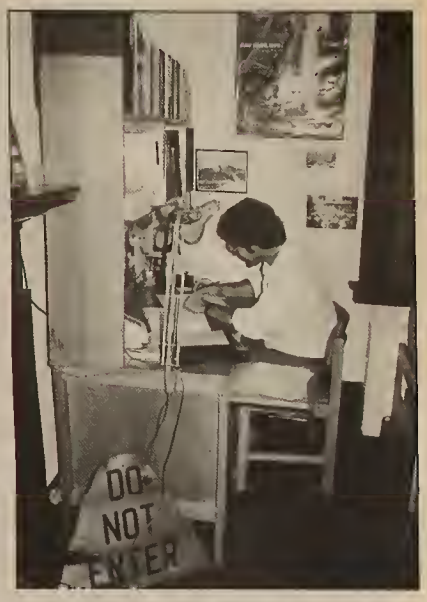
La besogne des professeurs, comme celle de leurs étudiants, est axée sur des travaux. Il ne peut y avoir que peu de professeurs, cependant, qui travaillent aussi peu que 40 heures par semaine. Aucun professeur n'obtient quatre mois de vacances par année comme le pensent certains. Durant l'été, les professeurs doivent continuer de faire de la recherche et d'écrire. Le professeur a droit d'habitude à quatre semaines de vacances par année. Beaucoup en prennent de plus courtes ou n'en prennent pas du tout.

Pourquoi quelqu'un voudrait-il devenir professeur d'université? La réponse est simple: apprendre et enseigner sont des choses immensément gratifiantes. Le chercheur *aime* ce qu'il fait. D'ordinaire, il ne peut s'imaginer faisant quelque autre travail. Les chercheurs croient aussi que leurs travaux sont importants pour le Canada.

"...Mais ils ont de si gros salaires!"

Au Canada, les professeurs sont moins payés que les membres d'autres professions libérales ayant une formation comparable. Ils le sont moins que les médecins, les avocats, les ingénieurs ou beaucoup de fonctionnaires.

Les professeurs commencent à gagner un salaire régulier plus tard que d'autres travailleurs à cause de leur longue formation. C'est ainsi qu'ils sont désavantagés comparativement aux employés du secteur privé qui peuvent gagner un salaire dès le début de leur formation. De nombreux professeurs ont aussi un assez gros prêt d'étudiant à rembourser aprés avoir commencé à travailler.



Quand le professeur commence à gagner, son salaire est faible. Le tableau 3 compare les salaires de diverses professions au Canada en 1982.

Le gain cumulé de toute leur vie de professeurs sera bien inférieur à celui d'autres professions. En établissant la moyenne du salaire annuel de divers travailleurs au cours d'une vie active normale (d'aprés les chiffres de 1979), on constate que les professeurs ont gagné une moyenne annuelle de $21,431 en dollars de 1979 jusqu'à leur retraite à 65 ans comparativement à $44,706 les avocats, $35,792 les comptables, $25,717 les ingénieurs, $23,039 les charpentiers et $22,648 les maîtres d'école[13].

Au cours des 15 dernières années, le salaire des professeurs a baissé en pouvoir d'achat réel. Il a aussi pris du retard comparativement à celui d'autres salariés au Canada. En 1985, le salaire moyen des professeurs canadiens valait $710 *de moins* qu'en 1983 et $1683 *de moins* qu'en 1971[14]. L'employé moyen de l'industrie canadienne gagnait un salaire valant $2105 *de plus* en 1983 qu'en 1971. Entre 1971 et 1983, le revenu personnel réel par employé au Canada a augmenté de 24.6%[15]. Par conséquent, en pouvoir d'achat réel, le professeur moyen a perdu environ 3.6% de son salaire depuis 1971 tandis que le travailleur industriel moyen a réalisé un

TABLEAU 3
SALAIRES ET TRAITEMENTS INITIAUX, 1982-83

Emploi	Apprentissage durée et rémunération	Salaire annuel initial
Plombier	1 1/2 à 4 ans 65% à 90% du salaire d'un travailleur	25 740$
Facteur	1 an	24 860$
Infirmière licenciée	2 à 4 ans	22 835$
Enseignant (primaire, secondaire) (Salaire de base, moyenne nationale)	4 ans baccalauréat	22 918$
Professeur adjoint* (salaire de base moyen)	8 ans	24 289$

Source: *What Jobs Pay*, Paul Aniseff et Etta Baichman, Hurtig Publishers, Edmonton
*Statistique Canada, Cat. 81-258S

PHOTO – CARLOS

gain de 9.6% et l'employé moyen, un gain de 24.6%.

Résultat: d'autres employeurs peuvent offrir un emploi gratifiant et des salaires plus élevés. Certains de nos professeurs et chercheurs les meilleurs sont partis des universités. Ce qui importe peut-être davantage à la longue, c'est que beaucoup d'étudiants ne considèrent pas le professorat comme aussi attrayant que d'autres carrières. En 1984, un des meilleurs diplômés en génie de l'Université du Nouveau-Brunswick a décidé de ne *pas chercher à obtenir* un grade plus élevé afin de devenir professeur quand on lui a offert un autre emploi plus payant que celui de son conseiller de faculté qui avait un doctorat et comptait presque 15 années d'expérience comme professeur. On pourrait citer des faits analogues au sujet de la plupart des universités.

Quand les meilleurs chercheurs s'en vont ailleurs, la perte est directe et grave. Les chercheurs apportent à leur université des milliers de dollars par année en fonds de recherche venant des gouvernements, des fondations de recherche ou de l'industrie privée. En 1982, il y avait au Canada 34,150 professeurs et les recettes totales destinées à la recherche parrainée des universités se sont chiffrées à $569,775,000[16]. Ainsi donc, le professeur attire à son université en moyenne environ $16,684 par année en fonds de recherche.

Souvent, le bon professeur apporte des fonds de recherche supérieurs à son salaire annuel. Ces fonds ne sont pas ajoutés au salaire du professeur. Ils servent à engager des adjoints de recherche ou des techniciens ou à acheter des matières et de l'équipement nécessaires à la recherche. Ils sont dépensés dans l'économie locale.

Quand les meilleurs chercheurs s'en vont ailleurs, l'effet peut en être cumulatif. Supposons, par exemple, que vous avez le meilleur club de hockey de la L.N.H. et que vous cédez votre meilleur joueur chaque année. Qu'en sera-t-il finalement de votre équipe? En vous départissant des meilleurs, vous aurez une équipe moins talentueuse et un milieu moins compétitif et moins stimulant pour chacun. Même les joueurs moyens y perdront en qualité.

Il pourrait en être ainsi pour nos universités. C'est pour celà qu'elles s'emploient à empêcher les salaires des professeurs de décliner davantage. Nous ne pouvons pas nous permettre de perdre la course aux meilleurs éléments pour ce qui est de l'enseignement et de la recherche.

"Des congés aux frais du contribuable"?

Les gens s'imaginent parfois que chaque professeur a un congé payé tous les six ou sept ans alors qu'il est étendu sur une plage en Espagne ou en Grèce aux frais du contribuable. Il n'en est rien.

Les "conditions" générales d'emploi des professeurs sont accessibles à n'importe qui. Vous pouvez consulter le document au bureau du personnel ou auprès de l'association des professeurs à votre université.

Le professeur qui a survécu au stage probatoire initial peut normalement demander un "congé d'études" d'un an, mais seulement s'il a fait six années d'enseignement à plein temps. Le congé lui permet de ne pas avoir à enseigner durant un an afin de se concentrer sur la recherche.

Souvenez-vous qu'une des parties les plus importantes de la tâche du professeur est de faire de la recherche, de découvrir des connaissances nouvelles et de rédiger ses conclusions à des fins de publication. Cela aide à maintenir et à augmenter au Canada la masse des connaissances et des compétences dont nous bénéficions tous. En outre, c'est grâce à ces travaux que se forme une nouvelle génération de chercheurs. Si les professeurs n'accomplissaient pas cette oeuvre, nous deviendrons rapidement incapables de maintenir cet ensemble de connaissances et de compétences. Les professeurs doivent avoir le temps nécessaire pour faire leur travail et c'est la pratique normale des universités nord-américaines d'accorder un congé d'études aux chercheurs les meilleurs.

Il ne suffit pas de demander un congé d'études pour l'obtenir. Le professeur doit démontrer à ses collègues et à ses administrateurs qu'il le mérite. Même s'il l'obtient, le professeur ne touchera qu'une partie (d'ordinaire 70-80%) de son salaire normal durant son congé. Souvent, le professeur ne peut se permettre de s'imposer une réduction de salaire de congé sabbatique afin d'aller en congé d'études. Les professeurs demandent donc à une fondation de recherches une "bourse de recherches", c'est-à-dire de l'argent afin de compenser leur diminution de salaire.

Les professeurs se disputent les bourses disponibles. La concurrence est âpre et beaucoup échouent. En 1984-85, le Conseil de recherches en sciences humaines du Canada a étudié environ 700 demandes de bourses de congé et n'en a approuvé que 29%! Beaucoup parmi les 500 candidats infructueux vont accepter la réduction de salaire afin de faire leurs recherches. Combien de Canadiens accepteraient 70% de leur salaire durant un an afin de mieux accomplir un des éléments les plus importants de leur tâche?

Souvent, les professeurs ont aussi besoin de subventions de recherche à des fins connexes: ils peuvent avoir à se déplacer pour fouiller des archives ailleurs au Canada ou à l'étranger, à consulter des experts ailleurs, à acheter de l'équipement scientifique, à payer du temps d'ordinateur, à engager des informaticiens, à embaucher des adjoints de laboratoire, et ainsi de suite. Les fonds affectés aux subventions de recherche sont aussi très limités et les professeurs doivent se les disputer.

Leur congé d'études terminé, les professeurs doivent présenter un rapport concernant leurs travaux à ceux qui leur ont accordé une subvention de recherche et une bourse de congé. Si son rapport n'est pas satisfaisant ou s'il ne rédige pas de textes à publier, le professeur aura beaucoup de difficulté à obtenir de nouveau de l'argent de congé.

Les professeurs doivent disputer à leurs confrères les outils essentiels à leur besogne: ils doivent leur disputer le temps et les subventions de recherche nécessaires à leurs travaux.

La concurrence fait partie de la trame de la vie des professeurs de nos universités, ce qui n'est pas une mauvaise chose. Les professeurs se disputent des fonds et rivalisent avec d'autres dans la quête du savoir et des

compétences. Contrairement à beaucoup d'autres professions, les professeurs doivent disputer à leurs confrères les outils essentiels à leur besogne: ils doivent leur disputer le temps et les subventions de recherche nécessaires à leurs travaux.

Quand les fonds destinés à la recherche sont rares, la concurrence peut être trop âpre et des travaux de recherche potentiellement précieux peuvent se trouvés stoppés.

"Les professeurs ne peuvent être mis à pied"

Selon certains, la permanence signifie qu'un professeur ne peut jamais se faire renvoyer, de sorte qu'il peut cultiver ses choux dans son jardin le reste de sa vie aux frais du contribuable. La réalité est fort différente.

La permanence signifie que le professeur a terminé son stage probatoire initial, a été apprécié par ses collègues et ses administrateurs et a été jugé digne de continuer à occuper son poste. Dans la suite, il ne peut être renvoyé que pour cause. Le *Guide*[7] de l'ACPU définit ainsi la permanence: "un contrat permanent qui ne peut se terminer que dans les cas de démission, de retraite ou de renvoi pour des raisons valables, déterminées par arbitrage."

Qu'est-ce que des "raisons valables"? La mauvaise conduite flagrante, l'incompétence ou la négligence persistante sont reconnues comme des raisons valables. Il est aussi généralement admis que les professeurs permanents peuvent avoir à être renvoyés si une université se trouve dans une nécessité financière extraordinaire.

Vous ne devriez pas être surpris d'apprendre, au vu de ce qui est dit ci-dessus, que peu de professeurs sont renvoyés une fois permanents. Les chercheurs peu compétents sont écartés au cours de la longue lutte compétitive qui se livre pour obtenir un doctorat, obtenir un emploi, réussir le stage probatoire, et ainsi de suite. Combien, par exemple, de médecins sont congédiés chaque année? Très peu. Pourquoi? Parce que les tests à subir durant leur formation sont tellement rigoureux que seulement des personnes passionnées, déterminées et hautement compétentes sont admises à entrer dans la profession. Il en va de même des professeurs.

Si le doyen ou le recteur sont d'avis qu'un professeur est incompétent, il leur incombe de prouver son incompétence. Les critères de l'incompétence sont très stricts et il faut qu'ils le soient. Ils doivent l'être parce que le professeur travaille avec des idées, des connaissances et des théories au sujet du monde et de la société. Les universités ne doivent pas pouvoir licencier des professeurs parce que certains éléments ou certaines personnes n'aiment pas leurs idées. Les universités risqueraient alors d'écraser des idées et des connaissances au lieu d'en créer.

Si les professeurs vivent dans la crainte d'être peut-être renvoyés à cause d'idées qui ne plaisent pas, ils seront gênés dans la création de connaissances et les universités se trouveront alors à détruire la raison même de leur existence. C'est pour cela que les conditions d'emploi de la plupart des professeurs leur garantissent le droit d'étudier, d'enseigner, de publier et de critiquer comme bon leur semble, sans se préoccuper de quelque doctrine prescrite. Elles reconnaissent aussi que cette liberté comporte l'obligation d'en user d'une façon qui cadre avec la recherche honnête de la vérité.

Toutes les universités nord-américaines importantes suivent des régles semblables à ces dernières. Ces règles sont l'équivalent professoral de la liberté de la presse et d'une magistrature libre et indépendante. En fait, les juges ont une permanence semblable à celle des professeurs et pour de semblables raisons. Ainsi donc, la permanence est essentielle à une société libre et démocratique. Si nous allions changer les règles et priver les professeurs de la libre expression des idées dans les universités, beaucoup d'entre eux s'en iraient et il est improbable que les universités telles que nous les connaissons puissent survivre.

Qu'est-ce que la "liberté universitaire"?

La liberté universitaire signifie la liberté des universitaires d'exprimer des idées, d'écrire, d'enseigner et de ne pas en subir de mauvaises conséquences. Les professeurs doivent avoir la liberté d'exprimer des idées qui ne plaisent pas ou sont controversables. L'idéal serait qu'il y ait aussi peu de restrictions que possible au "marché libre" des idées. Les idées doivent se confronter á d'autres idées et les théories à d'autres théories. Ce processus ne fonctionne bien et de façon créative que sous un climat de liberté.

Cela ne signifie pas qu'il n'y a pas de limites á la liberté d'expression dans les universités. Il en existe à la liberté d'expression dans notre société: des lois interdisent de promouvoir la haine raciale; il existe des lois contre le libelle; et des lois interdisent certains genres d'obscénité. Les universités existent au sein de la société et les universitaires doivent obéir eux aussi aux lois.

Il y a d'autres limites à la liberté d'expression dans une université. Les professeurs sont toujours conscients de ce que leurs idées peuvent exercer un effet hors de l'université. Les scientifiques, par exemple, savent que la découverte de la fission nucléaire a amené non seulement l'énergie nucléaire, mais aussi la bombe atomique. Les économistes savent que leurs théories peuvent influer directement sur les actes des politiciens: les théories d'Adam Smith, de Karl Marx et de John Maynard ont eu un impact trés direct sur des politiciens et des sociétés entières. L'autre limite à la liberté universitaire est donc qu'il faut en user de façon responsable. Cette responsabilité s'assure le mieux en discutant au maximum au sein et à l'extérieur des universités le pour et le contre de ces idées et leurs répercussions.

La liberté d'expression et la liberté des idées sont les fonctions essentielles d'une université. Sans liberté universitaire, l'université ne saurait exister.

Le public a-t-il voix au chapitre?

L'"autonomie universitaire" s'entend de ce que les universités peuvent se régir elles-mêmes tout en demeurant comptables à l'ensemble de la société. L'autonomie universitaire se considère d'ordinaire comme essentielle à la liberté universitaire.

Comme les idées, les connaissances et les compétences en sont le produit, l'université doit protéger sa liberté de créer et d'exprimer ces choses. Elle doit donc se régir elle-même dans une trés grande mesure: elle doit pouvoir dire ce qu'est le savoir ou ce qui constitue une compétence. Elle doit pouvoir dire ce que sont, par exemple, les mathématiques et si la connaissance des mathématiques est nécessaire à d'autres genres de connaissances telles que la physique, la chimie ou l'informatique.

Si quelqu'un qui ne s'est jamais servi des mathématiques décidait qu'elles sont inutiles et obtenait le pouvoir de les interdire à l'université, le "marché libre" des idées disparaîtrait alors et beaucoup de domaines du savoir, même en dehors des mathématiques, s'étioleraient et mourraient. Sans les mathématiques, il ne pourrait y avoir de physique, de génie ni d'informatique et il y aurait seulement une médecine primitive.

Si quelqu'un qui n'a jamais utilisé le grec ou le latin pouvait en interdire l'enseignement, beaucoup d'universitaires qui ont besoin de spécialistes de ces langues en souffriraient parce que les peuples anciens qui parlaient ces langues nous ont donné les racines de nos langues modernes ainsi que de notre culture et de nos us politiques.

Si les professeurs vivent dans la crainte d'être peut-être renvoyés à cause d'idées qui ne plaisent pas, ils seront gênés dans la création de connaissances et les universités se trouveront alors à détruire la raison même de leur existence.

Les universitaires doivent avoir l'indépendance nécessaire pour décider ce qu'est le savoir. Il faut aussi les laisser décider ce qui doit s'enseigner et ce qui doit s'apprendre. Ils doivent avoir un forum ou un organe supérieur, parfois appelés sénat ou conseil général des facultés, où eux et leurs représentants peuvent discuter et décider quelles matiéres importent et quelles connaissances doivent s'enseigner. L'indépendance de cet organisme est vitale parce que sans elle ne peut s'opérer une création efficace de connaissances et de compétences. Le sénat comprend normalement des professeurs, des étudiants et des administrateurs de l'université.

En même temps, l'université et ses membres doivent être comptables à la société de ce qu'ils font et il faut leur dire ce que la société attend d'eux. Le conseil d'administration est le pont entre la société et l'université. D'ordinaire, le conseil a de vastes pouvoirs lui permettant de veiller à ce que l'université réponde aux besoins du contribuable. La plupart des membres du conseil sont des hommes d'affaires, des praticiens des professions libérales ou des chefs syndiquaux de la collectivité et de la province. Le conseil décide en dernière instance de la politique financière de l'université et en assure ainsi le caractère responsable.

Toutes les universités nord-américaines fonctionnent dans le cadre de règles générales similaires. Nul n'a démontré que ce système ne sert pas l'intérêt public. Nul, à coup sûr, n'a démontré que ce serait mieux si les universités étaient dirigées par des politiciens ou des bureaucrates.

Il y a plusieurs années, c'était bien les politiciens qui choisissaient les professeurs. Un exemple fait voir le problème. Quand l'Université de Toronto a annoncé un poste de scientifique à pourvoir, elle a reçu la demande d'un des savants les mieux connus dans le monde entier. Le Premier ministre de l'Ontario a écarté sa demande et a obligé l'Université à engager un de ses proches.

Rien ne saurait mieux montrer pourquoi les universités doivent tenir à l'autonomie. Si nous changeons les règles au Canada, nous perdrons peut-être plusieurs de nos chercheurs et professeurs les meilleurs.

L'autonomie universitaire est tout aussi essentielle à l'existence de l'université que la liberté universitaire. Si le gouvernement ou la société essaient de dicter ce qu'est le savoir et ce qui s'enseigne, il n'y aura plus alors production efficace de connaissances et l'université sera peut-être mortellement blessée.

En Allemagne, dans les années 30, le gouvernement a supprimé l'autonomie universitaire et a essayé de dicter ce qui s'enseignait et qui devait enseigner selon l'idéologie nazie. La plupart des dictatures tentent de faire la même chose. Il en est résulté en Allemagne l'émigration de plusieurs des meilleurs savants du pays, la stagnation de ses universités et, surtout, une tyrannie d'ignorance et de préjugés.

Les beaux-arts: un luxe?

Certains pensent que la "culture" et les "arts" sont des luxes réservés à quelques-uns. Quand les temps sont bons, on peut se les permettre. Mais pourquoi dépenser des deniers publics afin de former des artistes alors qu'il nous faut de l'industrie et des emplois?

Il y a une double réponse. Premièrement, les arts sont une industrie et une grande industrie! Elle comprend la radiodiffusion, l'édition, les arts visuels et du spectacle, *l'enregistrement, la publicité et la cinématographie*. Au Canada, en 1981, cette industrie a été la plus grande quant à la main-d'oeuvre et a payé 2.5 milliards en salaires. A Vancouver seulement, en 1982, les organisations sans but lucratif ont dépensé 17 millions dans l'économie locale et on estime que les dépenses des auditoires (l'"effet multiplicateur" des auditoires) a porté à 43 millions les dépenses connexes aux divertissements artistiques[18].

PHOTO — ROBERT LANSDALE

En 1981, l'industrie des arts a été la plus grande quant à la main-d'oeuvre et a payé 2,5 milliards en salaires.

Les arts attirent aussi des visiteurs dans nos villes. Au Canada, en 1984, des millions de touristes ont dépensé 16.5 milliards en divertissements et en loisirs[19].

L'industrie des arts existe surtout parce que nos universités nous donnent des artistes professionnels. En fait, plus de 90% des diplômés de nos facultés de musique et des beaux-arts au Canada trouvent un emploi et tirent beaucoup de satisfaction de leur métier. La musique et les beaux-arts ne sont certainement pas du luxe. Ils contribuent à notre culture et à la qualité de nos vies — et à l'économie.

L'autre raison pour laquelle les beaux-arts ne sont pas un luxe est évidente: il nous faut des artistes non pas seulement à cause des sommes qu'ils nous valent, mais aussi de l'agrément et de la beauté qu'ils nous procurent par leur travail.

Les universités ont-elles accepté des restrictions?

Au Canada, les universités ont été soumises à une politique de restrictions budgétaires au cours des dix dernières années. Nos universités continuent d'en faire l'objet. La situation, cependant, devient critique.

Le graphique 1 montre que les sommes consacrées aux universités au Canada ont diminué en pourcentage de la dépense gouvernementale. En 1971, sur chaque dollar dépensé par les gouvernements provinciaux et fédéral, plus de 4 cents sont allés aux universités. Aujourd'hui, ces gouvernements ne consacrent qu'environ 2 1/4 cents aux universités[20].

Ces restrictions ne sont pas intervenues à cause du *déclin du nombre des étudiants ni d'une baisse* de la demande de recherches[21]. On le voit au graphique 2. Depuis 1977, il y a eu une augmentation de plus de 25% du nombre des étudiants au Canada. En outre, depuis 1977, la somme de recherche et de développement faits dans les universités canadiennes a augmenté de plus de 35% en termes réels. Au cours de cette période, les dépenses des universités n'ont progressé que de 5%.

Cependant, les moyennes nationales masquent certains cas extrêmes. En Ontario, les inscriptions de prédiplômés ont crû de 59% et la demande de recherches a augmenté de 42% dans les universités depuis 1970. Au cours de la même période, les budgets de fonctionnement ont fléchi de 14.5% en termes réels[22].

Quand les restrictions sont acceptées, dans la mesure où les universités les acceptent, la qualité de l'enseignement en souffre.

Il est clair que les universités emploient leur argent plus efficacement. Elles en emploient moins pour former plus d'étudiants et faire plus de recherches. Le graphique 3 montre que le coût de la formation d'un étudiant à plein temps dans une université canadienne a fort baissé. A cet égard, la productivité y a augmenté de 18% depuis 1978 seulement.

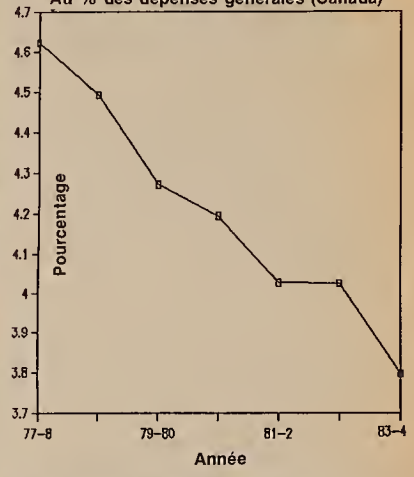
Au Canada, les professeurs enseignent à beaucoup plus d'étudiants depuis quelques années. Le graphique 4 montre l'évolution du rapport étudiants-professeur dans les universités canadiennes depuis 1977. Les professeurs sont soumis aux restrictions. Ils ont accepté le besoin de former plus d'étudiants et cela même si leurs salaires ont fléchi en termes réels.

Nos universités ont accepté et appliqué la restriction des dépenses. Cela prouve que les universités demeurent comptables à la société et sont prêtes à fonctionner dans les limites de ce qu'elle peut se permettre. D'autre part, les universités se doivent d'avertir la société que cette restriction massive a un prix. Quand les restrictions sont acceptées dans la mesure où les universités les acceptent, la qualité de l'enseignement en souffre. Les salles

GRAPHIQUE 1

SUBVENTIONS PROVINCIALES DE FONCTIONNEMENT

Au % des dépenses générales (Canada)



de cours deviennent encombrées, les bibliothèques ne peuvent acheter tous les livres dont elles ont besoin, l'équipement de laboratoire est démodé, des enseignements précieux peuvent disparaître complètement et beaucoup de nos meilleurs professeurs et administrateurs s'en vont ailleurs.

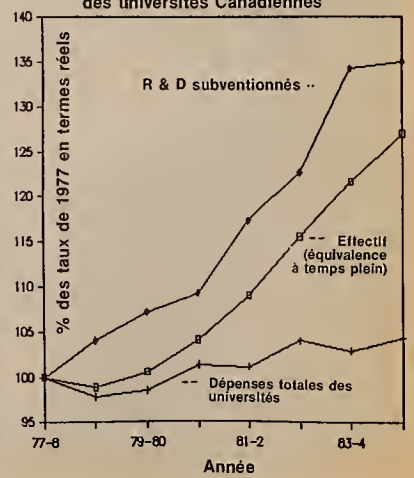
Les étudiants ont-ils accepté des restrictions?

Ses études universitaires coûtent cher à l'étudiant à court terme. Un grade qui exige quatre années d'études peut coûter autant que $25,000. Il y a aussi le coût élevé du manque à gagner, ce qui ajouterait encore $25,000, même si l'étudiant n'avait gagné que le salaire minimum durant seulement huit mois passés à l'université chaque année. Il y a des bourses d'études, mais elles ne sont accessibles qu'à très peu; il y a des prêts, mais ils sont de plus en plus difficiles à obtenir. Tout cela ensemble fait qu'il est de plus en plus difficile aux diplômés aptes du secondaire d'aller à l'université.

GRAPHIQUE 2

ÉROSION DE LA CAPACITÉ FINANCIÈRE

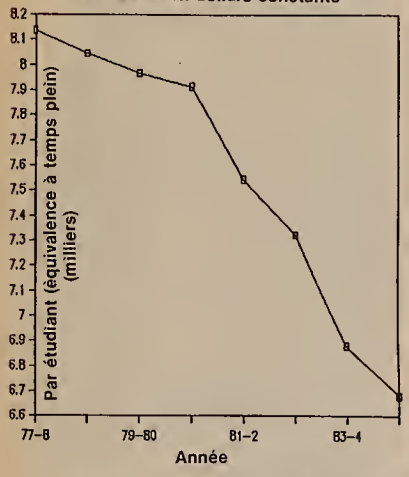
des universités Canadiennes



GRAPHIQUE 3

DÉPENSES PAR ÉTUDIANT (ÉQUIVALENCE À TEMPS PLEIN)

Au Canada en dollars constants



Les étudiants continuent à s'instruire dans les universités, même si cela coûte plus cher. Ces dernières années, les frais de scolarité dans toutes les parties du pays, sauf le Québec, ont augmenté à une cadence plus rapide que le coût de la vie. Les frais de scolarité à une université canadienne représentative sont aujourd'hui d'environ $1300, sauf au Québec où ils sont bien inférieurs. En outre, les étudiants doivent souvent vivre éloignés de chez eux et ne reçoivent pas d'allocation de subsistance. Dans certaines provinces, il est maintenant plus difficile d'obtenir l'aide du gouvernement.

Les étudiants ont été soumis aux restrictions, mais ici encore il y a un prix à payer. L'expérience de l'Université de Victoria constitue un exemple. En 1984, beaucoup d'étudiants aptes qui avaient été admis ne se sont pas présentés. L'Université a fait enquête auprès d'un millier d'entre eux. Certains étaient allés à d'autres universités et collèges, mais la plupart avaient décidé d'abandonner leurs études et plus de la moitié d'entre eux ont dit que c'était affaire d'argent.

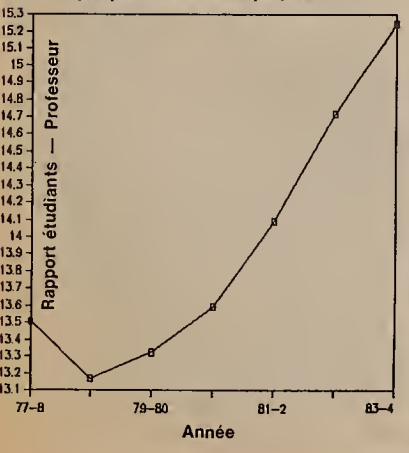
Il n'y a pas d'égales possibilités dans l'enseignement supérieur. Dans plusieurs parties du Canada, les diplômés du secondaire des régions urbaines sont beaucoup plus susceptibles d'aller à l'université que ceux des régions rurales et l'écart s'accentue.

Si vous habitez une région rurale, il vous est beaucoup plus difficile à vous et à vos enfants d'aller à l'université et de profiter des chances d'emploi que vaut un grade universitaire. Cela va vous coûter beaucoup plus cher que si vous viviez en milieu urbain doté d'une université. Il faut reconnaître ces frais et il faut trouver le moyen de faire que tous les Canadiens aient la même chance de bénéficier d'une formation universitaire.

GRAPHIQUE 4

RAPPORT PROFESSEUR — ÉTUDIANTS

Étudiants (Équivalence à temps plein) par professeur à temps plein



Le mystère des fonds qui disparaissent

On est fort en désaccord dans les coulisses quant à savoir qui paie nos universités. Les gouvernements fédéral et provinciaux contribuent aux frais de fonctionnement. Au cours des dix dernières années, les deux échelons ont trouvé comment réduire leur apport et en blâmer l'autre échelon. C'est là un simple tour politique, mais c'est vous qui y perdez parce que la qualité des universités canadiennes ne peut que s'en ressentir.

Entre 1982 et 1984, le gouvernement fédéral a apporté aux accords fiscaux des modifications qui ont réduit de plus d'un milliard par année sa contribution. Cependant, certaines des provinces ont fait pire encore. La situation en Colombie-Britannique est très instructive.

En 1984 et 1985, les contributions fédérales à la Colombie-Britannique se sont fort accrues, mais le gouvernement provincial a diminué ses subventions de fonctionnement aux universités. Si la province avait maintenu sa part du financement au même niveau relatif qu'en 1978, les universités et collèges de la province auraient reçu 149 millions de plus qu'il n'en a été en 1985.

Le gouvernement provincial prend-il de l'argent qui appartient à juste titre aux universités et s'en sert-il à d'autres fins? Pas nécessairement: cela dépend de la façon dont on interprète les chiffres. Le gouvernement *provincial conteste les chiffres fédéraux. Ce qui est très* clair, cependant, c'est que, à tous égards, la contribution provinciale nette aux universités baisse à un rythme très rapide en Colombie-Britannique.

Beaucoup de gens en Colombie-Britannique se demandent où est allé l'argent fédéral, dans quoi il a été investi et s'il rapportera plus que s'il avait été investi dans la formation de nos jeunes.

La Colombie-Britannique n'est pas unique. En Ontario, par exemple, les dépenses réelles par équivalent d'étudiant à plein temps ont diminué de $7,531 en 1977-78 à $6,219 en 1984-85, soit une baisse de 17.4%.

La question a fait l'objet d'une série de disputes stériles entre le gouvernement fédéral et les provinces. Les deux échelons ont réduit leur financement de l'enseignement supérieur et ont attribué le fait aux actes de l'autre échelon. Ce sont les universités et collèges du Canada, pris entre deux feux, qui y ont perdu. Il est urgent pour le Canada que les deux échelons s'acquittent de leurs responsabilités envers les jeunes du pays et négocient de meilleures dispositions quant au financement des universités et collèges.

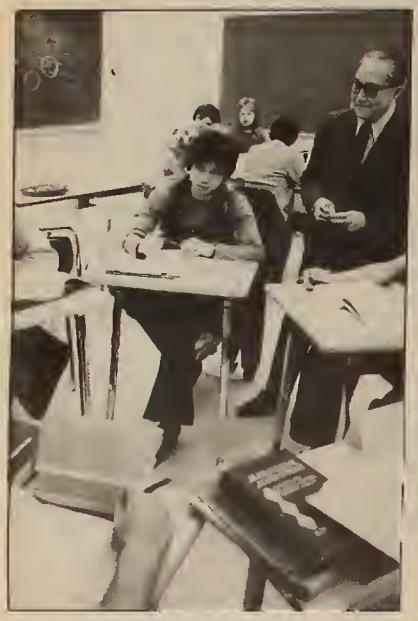
TABLEAU 4

EFFECTIFS UNIVERSITAIRES À PLEIN TEMPS PAR RAPPORT AU GROUPE D'ÂGE 18-24 ANS

	71-72	74-75	77-78	80-81	83-84
Terre-Neuve	10.7%	8.2%	8.9%	9.0%	10.3%
Ile-du-Prince-Edouard	13.2%	9.5%	10.1%	8.4%	10.4%
Nouvelle-Ecosse	16.5%	16.2%	16.6%	16.1%	19.4%
Nouveau-Brunswick	13.2%	12.0%	11.8%	12.0%	14.9%
Québec*	8.0%	8.5%	9.2%	10.2%	11.7%
Ontario	14.2%	14.9%	14.8%	14.4%	15.9%
Manitoba	14.2%	13.7%	13.2%	12.4%	15.1%
Saskatchewan	14.3%	12.3%	12.2%	11.5%	14.6%
Alberta	14.2%	13.0%	11.4%	9.1%	11.3%
Columbie-Britannique	11.0%	10.3%	9.7%	9.2%	10.5%
CANADA	12.0%	12.0%	12.0%	11.7%	13.5%

*Les chiffres du Québec sont plus bas à cause de la structure particulière de l'enseignement postsecondaire dans cette province

Source: Statistique Canada: L'Education au Canada, 81-229



Sommes-nous des Canadiens sans instruction?

Au Canada, nous envoyons beaucoup moins de jeunes à l'université que notre grand partenaire commercial, les Etats-Unis. En outre, comme le montre le tableau 4, il existe de grandes différences entre les régions dans le pourcentage de 18-24 ans que nous y envoyons. Nous gaspillons notre potentiel humain.

Les Canadiens de toutes les provinces devraient avoir également accès à un enseignement de qualité. Dans certaines parties du pays, il est manifeste que le gouvernement aime mieux importer des travailleurs des professions libérales que de former ses propres gens. Cela non seulement est scandaleux, mais ne fera pas l'affaire à la longue parce que le monde entier se dispute les esprits les plus brillants.

Qu'en est-il de la croissance économique?

Le chômage au Canada atteint un point inacceptable et particulièrement chez nos jeunes. Où vont-ils trouver un emploi?

Nos industries traditionnelles, agriculture, foresterie, extraction minière et pêche, semblent incapables de créer de l'emploi aussi rapidement que déjà, même alors qu'elles se remettent de la récente récession.

Il y aura reprise économique au Canada seulement s'il y a association et coopération entre de nombreux éléments et institutions de notre société. Les universités doivent faire partie de cette association.

Il faudrait écouter nos professeurs du domaine forestier qui nous signalent depuis des années ce que coûte l'absence de gestion forestière et de reboisement. Il faudrait écouter les scientifiques et les technologues qui savent comment il y a moyen de rattacher la mise en valeur des ressources à l'innovation technologique. Il faudrait écouter les économistes qui savent ce qu'il en est des besoins du marché et peuvent en établir des projections.

Il faudrait écouter les hommes d'affaires qui nous disent que la croissance économique future dépendra de notre aptitude à rivaliser avec d'autres pays en matière de gestion, de compétences, de technologie et de capacité novatrice. Ils nous disent que ce ne sont pas seulement les seules concessions fiscales qui peuvent attirer de nouveaux investissements dans des régions de l'Amérique du Nord, mais aussi en même temps une combinaison d'avantages. Ces avantages comprennent: une population active hautement qualifiée, un système de relations industrielles stables, des masses locales de capitaux financiers et matériels et, selon l'*Office of Technology Assessment* de Washington, D.C., "la proximité d'une puissante université de recherche."[23]

Il faudrait peut-être écouter les hommes d'affaires américains qui disent: "Beaucoup de sociétés aboutissent où elles sont à cause du voisinage d'une maison d'enseignement." Il faudrait peut-être écouter le président d'une entreprise d'électronique de la Caroline du Nord qui dit: "C'est vraiment la situation de l'université qui a fait démarrer les choses." Il faudrait peut-être écouter les dirigeants de sociétés du Triangle de recherches de la Caroline du Nord, de l'Autorité du développement industriel du Vermont, du "corridor technologique" du Tennessee et de la vallée de la "silicone" de la Californie. Ils nous disent que leurs entreprises se sont établies où elles sont surtout à cause de la disponibilité d'une main-d'oeuvre hautement qualifiée et de la présence d'universités bien financées. Comme l'a dit le gouverneur de la Pennsylvanie: "Les ressources nécessaires pour mettre à profit de la technologie nouvelle ont toujours été ici...Nous avons 50,000 scientifiques et ingénieurs...peut-être à cause de la présence ici de quatre des universités de recherche les meilleures du pays."

Il faudrait peut-être écouter les hommes d'affaires et les économistes et bien d'autres qui disent qu'il nous faudra à l'avenir non pas seulement des spécialistes, mais aussi des jeunes gens très instruits, dotés d'une solide formation générale et aptes à apprendre à se servir des nouvelles technologies de demain.

Qu'est-ce que nous allons donc faire?
Qui a besoin des universités?
Vous et vos enfants.

Ête-vous d'accord qu'il faudrait limiter les avantages de l'enseignement postsecondaire à quelques chanceux? Êtes-vous prêt à perdre la course aux compétences et au savoir? Voulez-vous renoncer à la possibilité d'assurer au pays une croissance économique fondée sur le savoir?

Êtes-vous prêt à dire à vos enfants: "Vous ne pouvez allez à l'université parce que nous ne pouvons pas nous le permettre"?

Si votre réponse est "non", alors ne demeurez pas silencieux. Dites ce que vous pensez au prochain politicien qui vient frapper à votre porte, à votre député fédéral ou provincial, au prochain enquêteur d'opinion qui vous téléphone et à vos enfants!

L'ENSEIGNEMENT EST NOTRE GRANDE OEUVRE LA PLUS IMPORTANTE!

Pour obtenir de plus amples renseignements sur les universités canadiennes, prière d'écrire au:

Président
Association canadienne des professeurs d'université
1001 - 75, rue Albert
OTTAWA (Ontario)
K1P 5E7

NOTES

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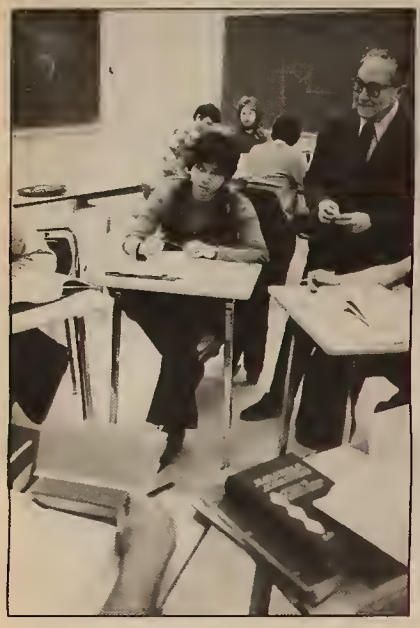


ed provisions for the funding of universities and colleges.

Are we the uneducated *Canadians?*

In Canada we send far fewer young people to university than does our major trading partner, the United States. Furthermore as Table 4 shows, there are large differences among regions in the percentage of 18-24 year olds whom we send to university. We are wasting our human potential.

Canadians in all provinces should have equal access to quality education. In some parts of the country it is clear that government prefers to import professional workers rather than educate its own people. This is not only scandalous, but it will not work in the long run since the whole world is competing for the best and the brightest.

And what about economic growth?

The rate of unemployment in Canada is unacceptably high, and particularly so among our young people. Where will these people find jobs?

Our traditional industries — farming, forestry, mining, and the fisheries — appear unable to create jobs as quickly as they used to, even as they recover from the recent recession.

If economic recovery is to occur in Canada, it will only come if there is a partnership and cooperation between many groups and institutions in our society. The universities must be part of this partnership.

We should listen to our professors of forestry who have been warning us for years of the costs of failing to engage in forest management and reforestation. We should listen to the scientists and technologists, who know how we may link resource development to technological innovation. We should listen to the economists, who have knowledge of market demands and can project these into the future.

And we should listen to those businessmen who tell us that future economic growth will depend on our ability to compete with the management, the skills, the technology, and the innovative capacities of other nations. They are telling us that new investment may be attracted to regions of North America, not by means of tax breaks alone, but only where a combination of advantages is present. Those advantages include: a highly skilled labour force; a stable industrial relations system; existing local pools of financial and physical capital; and — according to the Office of Technology Assessment in Washingston D.C. — "the proximity of a strong research university".[23]

We might listen to the American businessman who said: "Lots of companies end up where they are because there's an educational institution nearby." We might listen to the President of an electronics firm in North Carolina who said: "It was really the university situation that got things started." We might listen to the executives of companies in the North Carolina Research Triangle, in the Vermont Industrial Development Authority, in the Tennessee "technology corridor", and in California's "Silicon Valley." They are telling us that their firms located where they did in large part because of the availability of highly-skilled labor and well-funded universities. As the Governor of Pennsylvania said: "The resources for building with new technology have always been here...We have 50,000 scientists and engineers...perhaps because four of the country's top research universities are here."

We might listen to the businessmen and the economists and many others who are saying that in future we need not only specialists, but highly literate young people with a sound general education who may be trained to work with the new technologies of tomorrow.

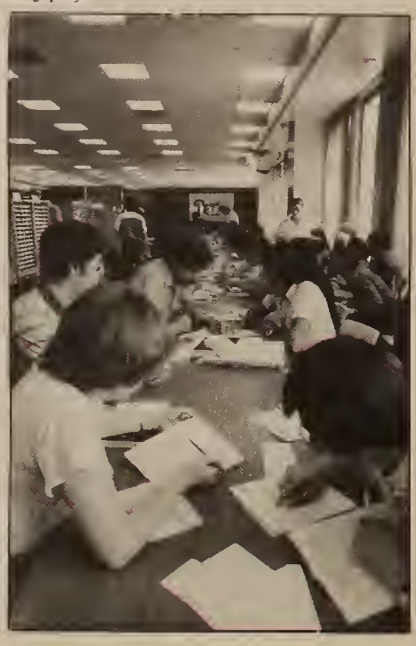
What are we going to do about it?

Who needs universities?
You do.
So do your children.

Do you agree that we should limit the benefits of post-secondary education to the fortunate few? Are you prepared to lose the competition for skills and knowledge? Do you wish to give away the opportunity for knowledge-based economic growth?

Are you prepared to say to your children: "You cannot go to university — we cannot afford it"?

If your answer is no, then do not remain silent. Tell the next politician who knocks on your door, tell your MP or MLA, tell the next pollster who phones, and tell your children: education is our most important megaproject!



EDUCATION IS OUR MOST IMPORTANT MEGAPROJECT

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For further information on Canadian universities, please write to:

The President
Canadian Association of University Teachers
1001 - 75 Albert Street
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GRAPH 3

EXPENDITURE PER FTE STUDENT

for Canada in constant dollars

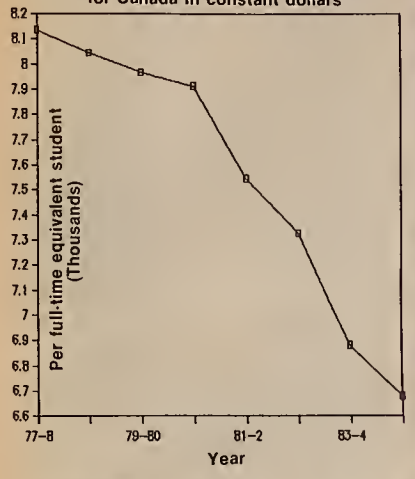


PHOTO — U OF T COMMUNICATIONS

even though it costs them more. In recent years, tuition fees in all parts of Canada other than Quebec have increased at a rate greater than the cost of living. Typical tuition fees at a Canadian university are now about $1300, except in Quebec where they are substantially lower. In addition, students must often live away from home, and they receive no living allowance to help them. In some provinces, it has become more difficult to obtain government assistance.

Students have been subject to restraint, but again there is a cost. An example is the experience of the University of Victoria. In 1984 many qualified students who had been admitted did not show up. The university surveyed about 1000 of these. Some had gone to other universities and colleges, but most had decided not to continue their education — and over half of these said that money was a problem.

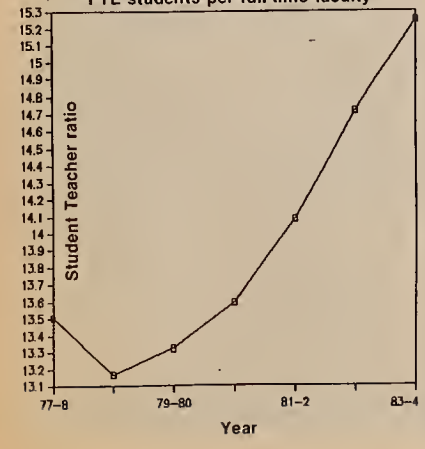
There is no equal opportunity in higher education. In many parts of Canada, high school graduates in urban areas are much more likely to go to university than are those from the rural areas, and the gap is widening.

If you live in a rural area, it is much tougher for you or your children to go to university and to benefit from the job opportunities which come from a university degree. It will cost you much more than it would if you lived in an urban setting with a university in the city. These costs must be recognized and means found to ensure that all Canadians have an equal opportunity to benefit from a university education.

GRAPH 4

STUDENT-TEACHER RATIO

FTE students per full-time faculty



The disappearing dollar mystery

There is a serious disagreement behind the scenes about who *is paying for our universities. Both* the federal and provincial governments contribute to the operating grants. Over the past ten years, both levels have found ways of reducing their commitments and blaming the other level. This is a neat political trick, but you are the ultimate loser since the quality of Canadian universities is bound to be affected.

Between 1982 and 1984, the federal government made changes in the fiscal arrangements which reduced its commitments by over $1 billion per year. However, some of the provinces have been even more irresponsible. The situation in British Columbia is very instructive.

In both 1984 and 1985, federal contributions to BC increased substantially, yet the provincial government decreased the operating grants to the universities. Had the province maintained its share of the funding at the same relative position as in 1978, the universities and colleges of BC would have received $149 million more than they actually did in 1985.

Is the provincial government taking money which properly belongs to the universities and using it for other purposes? Not necessarily: it depends how you interpret the figures. The provincial government disputes the federal figures. But what is very clear is that by any measure, the net provincial contribution to universities is falling at a very rapid rate in BC.

Many citizens in BC are asking: Where did that money from the federal government go? In what things was it invested? Will that investment yield greater returns than if it had been invested in the education of our young people?

British Columbia is not unique. In Ontario, for instance, real expenditures per full time equivalent student *fell from $7531 in 1977-78 to $6219 in 1984-85,* — a drop of 17.4%.

Both levels of government have made cuts in their funding for higher education and blamed the cuts on the actions of the other level of government.

There has been a series of sterile wrangles between the federal and provincial governments over this issue. Both levels of government have made cuts in their funding for higher education and blamed the cuts on the actions of the other level of government. The loser has been the universities and colleges of Canada who have been caught in the cross-fire. Canada urgently needs both levels of government to meet their responsibilities to the young people of Canada and negotiate improv-

TABLE 4

FULL-TIME UNIVERSITY ENROLMENT RELATED TO 18-24 AGE GROUP

	71-72	74-75	77-78	80-81	83-84
NEWFOUNDLAND	10.7%	8.2%	8.9%	9.0%	10.3%
P.E.I.	13.2%	9.5%	10.1%	8.4%	10.4%
NOVA SCOTIA	16.5%	16.2%	16.6%	16.1%	19.4%
NEW BRUNSWICK	13.2%	12.0%	11.8%	12.0%	14.9%
QUEBEC*	8.0%	8.5%	9.2%	10.2%	11.7%
ONTARIO	14.2%	14.9%	14.8%	14.4%	15.9%
MANITOBA	14.2%	13.7%	13.2%	12.4%	15.1%
SASKATCHEWAN	14.3%	12.3%	12.2%	11.5%	14.6%
ALBERTA	14.2%	13.0%	11.4%	9.1%	11.3%
B.C.	11.0%	10.3%	9.7%	9.2%	10.5%
CANADA	12.0%	12.0%	12.0%	11.7%	13.5%

*Quebec figures are lower because of their unique postsecondary education structure.

Source: Statscan: Education in Canada, 81-229

University of Toronto advertised for a scientist, it received an application from one of the best known scientists in the world. The Premier of Ontario turned down the application and required Toronto to hire one of his relatives.

Nothing could better illustrate why universities insist on autonomy. If we change the rules in Canada, then we may lose many of our best researchers and teachers.

The Board of Governors is the bridge between society and the university ... it has broad powers to ensure that the university meets the needs of the taxpayer.

University autonomy is just as essential to the existence of the university as is academic freedom. If government or society attempts to dictate what is knowledge, and what is taught, then the efficient production of knowledge is gone, and the university may be mortally wounded.

In Germany in the 1930s, the government eliminated university autonomy and attempted to dictate what was taught and who should teach, according to Nazi ideology. Most dictatorships try to do the same thing. The result in Germany was the emigration of many of the best of the country's scientists, the stagnation of its universities, and — above all — a tyranny of ignorance and prejudice.

Fine arts: a frill?

Some people think that "culture" and "art" are luxuries to be enjoyed by a few. In good times we can afford them. But why spend taxpayers' money training artists when we need industry and jobs?

There are two answers to this question. First, the arts *are an industry, and a big industry! It includes* broadcasting, publishing, visual and performing arts, recording, advertising, and motion pictures. In Canada in 1981 this industry was our largest in terms of labour employed, and it paid wages of $2.5 billion. In Vancouver alone *in* 1982 non-profit arts organizations spent $17 million in the local economy, and it is estimated that spending by audiences (the audience "multiplier effect") brought the total spending relating to arts entertainment to $43 million.[18]

PHOTO — ROBERT LANSDALE

In 1981 the arts industry was Canada's largest in terms of labour employed and it paid wages of $2.5 billion.

The arts also attract visitors to our cities. In Canada in 1984, millions of tourists spent $16.5 billion on entertainment and recreation.[19]

The arts industry exists largely because our universities give us professional artists. In fact, over 90% of the graduates of our faculties of Music and Fine Art in Canada find jobs and enjoy high job satisfaction. Music and Fine Arts are definitely not frills. They contribute to our culture and to the quality of our lives — and they contribute to the economy.

The other reason why Fine Arts is not a frill is obvious: we need artists, not just for the money which they attract, but also for the pleasure and the beauty which they give us by their work.

Have universities accepted restraint?

In Canada, universities have been subject to a policy of restraint for over ten years. Our universities continue to experience restraint. However, the situation is becoming critical.

As Graph 1 shows, the money spent on universities in Canada has declined as a percentage of government spending. In 1971, out of every dollar the provincial and federal governments spent on your behalf, over 4 cents went to universities. Today, the federal and provincial governments spend only about 2 1/4 cents on universities.[20]

This restraint has not occurred because of a decline in the number of students. Nor has it declined as a result of a *decrease in demand* for research.[21] This is shown in Graph 2. Since 1977, there has been more than a 25% increase in the number of students at Canadian universities. Also since 1977, the amount of sponsored research and development in Canadian universities has increased by more than 35% in real terms. During this period, there has been less than a 5% increase in university expenditures.

However, the national averages hide some extreme cases. In Ontario, the universities have experienced increased undergraduate enrolments of 59% and increased research pressures of 42% since 1970. Over that same time period, operating budgets have fallen by 14.5% in real terms.[22]

It is clear that the universities have been using their dollars more efficiently. They use fewer dollars to teach more students and do more research. Graph 3 shows that the cost of educating a full time student at a Canadian university has fallen sharply. By this standard there has been an 18% improvement in productivity since 1978 alone.

When restraint is accepted, to the degree that our universities are accepting it, the quality of education must suffer.

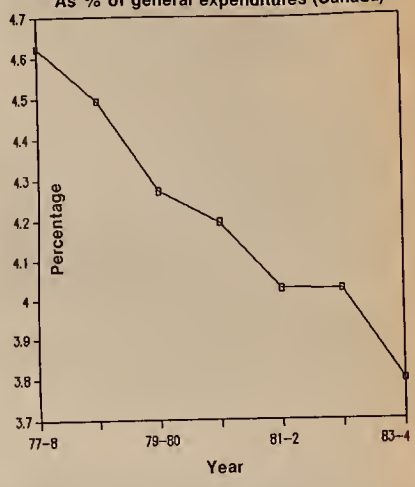
In Canada, professors have been teaching far more students in recent years. Graph 4 shows the change in the student-professor ratio in Canadian universities since 1977. Professors have been subject to restraint. They have accepted the need to teach more students, and to do so even as their salaries were declining in real terms.

Our universities have accepted and implemented restraint in expenditures. The fact that they have done so proves that universities remain accountable to society, and willing to work within the limits of what society can afford. At the same time universities have a duty to warn society that such massive restraint does, in itself, entail costs. When restraint is accepted, to the degree that our universities are accepting it, the quality of education must suffer. Classes become over-crowded, libraries cannot buy all the books they need, lab equipment is out-dated, valuable programs may disappear altogether, and many of the best professors and our best administrators go elsewhere.

GRAPH 1

PROVINCIAL OPERATING GRANTS

As % of general expenditures (Canada)



Have students accepted restraint?

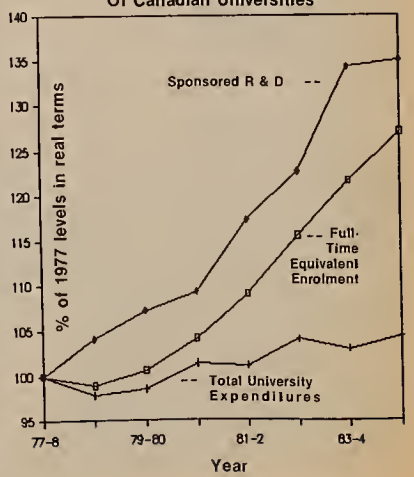
The cost to the student of a university education is high in the short run. It may cost as much as $25,000 to earn a four-year degree. There is also a large cost in lost earnings. This could amount to another $25,000 even if the student had earned only the minimum wage for only 8 months of each year spent at university. There are scholarships, but they are available to very few, and there are loans, but they are increasingly difficult to obtain. Taken together these facts mean that it is increasingly difficult for qualified high school graduates to enter university.

Students continue to seek education in our universities

GRAPH 2

EROSION OF THE FINANCIAL CAPACITY

Of Canadian Universities



When research funding is scarce, the competition may be too stiff, and potentially valuable research may be stopped.

"Professors cannot be fired"

Some people think that tenure means that professors can never be fired, so they can putter about in the garden for the rest of their lives at taxpayers' expense. The truth is quite different.

Tenure means that the professors have completed their initial probationary appointment, they have been evaluated by their peers and their administrators, and they have been found worthy of continuing to hold their jobs. Thereafter they may be fired only for just cause. The CAUT *Handbook*[17] defines tenure as "an appointment without term that may be terminated only through resignation, retirement or dismissal for good reasons as established by a proper hearing."

What are "good reasons"? Gross misconduct, incompetence or persistent neglect of duties are all recognized as good reasons. It is also generally accepted that tenured professors may have to be laid off in the case of a university suffering extraordinary financial exigency.

It should be no surprise to learn, in view of the above considerations, that few professors are fired after having been granted tenure. Less competent researchers are cast aside in the long competitive struggle to get a Ph.D., to get a job, to pass one's probation, and so on. Ask yourself this: how many medical doctors are fired every year? Very few. Why? Because the tests they must pass during their training are so rigorous that only dedicated, determined and highly competent people are allowed into the profession. The same is true of professors.

If a Dean or a President believes that a professor is incompetent, the onus is on them to prove incompetence. The tests for incompetence are very strict, and they must be so. They must be so because the professor is one who works with ideas, knowledge, and theories about the world and about society. The university must not be allowed to fire professors because some groups or individuals do not like their ideas. The university would then be in danger of crushing ideas and knowledge, instead of creating them.

If professors live in fear that they may be fired for having unpopular ideas, they will be inhibited in their creation of knowlege — and the university will then be destroying the very reason for its existence.

If professors live in fear that they may be fired for having unpopular ideas, they will be inhibited in their creation of knowledge — and the university will then be destroying the very reason for its existence. This is why the Terms and Conditions of Employment for most faculty guarantee the right to study, teach, publish and criticize as they see fit, without deference to any prescribed doctrine. They also recognize that this freedom carries with it the duty to use that freedom in a way that is consistent with an honest search for truth.

All universities of consequence in North America follow rules similar to these. They are the academic equivalent of freedom of the press and of a free and independent judiciary. In fact, judges have tenure similar to professors, and for similar reasons. Thus, tenure is basic to a free and democratic society. If we were to change the rules and to deny free expression of ideas in universities, many professors would leave, and it is unlikely that the universities as we know them could survive.

What is "Academic Freedom"?

Academic freedom means the freedom of those in the university to express ideas, to write, to teach, and to suffer no ill consequences for doing so. Professors must have the freedom to express ideas that may be unpopular or controversial. Ideally, there should be as few restrictions as possible in the "free market" of ideas. Ideas must be tested against other ideas, theories against theories, and this process works efficiently and *creatively only in a condition of freedom.*

This does not mean that there are no limits to freedom of expression in the university. There are limits to freedom of expression in our society: there are laws against inciting racial hatred; there are laws of libel; and there are laws against certain kinds of obscenity. The university exists within society, and so university people must obey the laws too.

There are other limits to freedom of expression in a university. Professors are always aware that their ideas may have effects outside the university. Scientists, for instance, know that the discovery of nuclear fission led not only to nuclear power but also to the atomic bomb. Economists know that their theories may influence directly the actions of politicians: the theories of Adam Smith and Karl Marx and John Maynard Keynes had very direct effects on politicians and on entire societies. Thus the further limit on academic freedom is that it be used responsibly. This responsibility is best ensured by the fullest debate within the university and outside it of the merits and demerits of these ideas and their consequences. Freedom of expression, and freedom of ideas, are the essential functions of a university. Without academic freedom the university cannot exist.

Does the public have a say?

"University autonomy" means the ability of the university to govern itself while at the same time remaining accountable to society as a whole. University autonomy, or self-governance, is usually considered to be essential to academic freedom.

Since ideas and knowledge and skills are the product of the university, the university must protect its freedom to create and to express these things. The university must, therefore, govern itself to a very large degree: the university must be able to say what is knowledge, or what constitutes skill. The university must be able to say what is mathematics, for instance, and whether mathematical knowledge is necessary for other types of knowledge, such as physics, chemistry, or computer science.

If somebody who never used mathematics decided that it was useless, and acquired the power to forbid mathematics in the university, then the "free market" of ideas would disappear and many areas of knowledge, even outside mathematics, would wither and die. Without mathematics there could be no physics, no engineering, no computer science, and only a primitive medicine.

If somebody who never used Greek or Latin languages had the power to forbid the teaching of these, then many in the university who need such specialists would suffer, for the ancient peoples who spoke these languages gave us the roots of our modern languages and our culture and our politics.

The people of the university must have the independence to decide what is knowledge. They must also be left to decide what is to be taught, and what is to be learned. They must have a forum or senior academic body — usually called the Senate or General Faculties Council — in which they and their representatives argue and decide what subjects are important and what knowledge is to be taught. The independence of this academic body is vital, since without that independence the efficient creation of knowledge and skills cannot occur. The Senate normally includes professors, students, and university administrators.

Academic freedom means the freedom of those in the university to express ideas, to write, to teach, and to suffer no ill consequences for doing so .... without it the university cannot exist.

At the same time the university and its members must answer to society for what they do, and they must be told what society expects of them. The Board of Governors is the bridge between society and the university. Typically, the Board has broad powers to ensure that the university meets the needs of the taxpayer. Most of the Board members are businessmen, professionals, or union leaders from the community and the province. They usually have the ultimate decision-making power in regard to the financial policies of the university and thus ensure the fiscal accountability of the institution.

All universities in North America operate within similar general rules. Nobody has demonstrated that this governing system fails to serve the public interest. Certainly no one has demonstrated that it would be better if they were run by politicians or bureaucrats.

Many years ago, the politicians did choose the professors. One story illustrates the problem. When the

PHOTO — CARLOS

students do not view being a professor as an attractive career, relative to other options. In 1984, one of the best engineering graduates of the University of New Brunswick decided against seeking a higher degree to become a professor when he was offered another job at a starting salary higher than his faculty advisor, who had a Ph.D. and almost 15 years of experience as a professor. Similar anecdotes can be told about most universities.

When the best researchers go elsewhere, the loss is direct and serious. Researchers bring into the university thousands of dollars a year in research funds, paid by governments, research foundations, or private industry. In 1982, there were 34,150 professors in Canada and the total university revenues for sponsored research amounted to $569,775,000.[16] Thus, a professor attracts to the university, on average, about $16,684 per year in research funds.

The cumulative lifetime earnings of professors are well below earnings in other professions.

Often a good professor brings in research funds greater than his or her annual salary. These dollars are not added to the professor's salary. They are used to hire research assistants or technicians, or to buy materials and equipment necessary for research. They are spent in the local economy.

When the best researchers go elsewhere, the impact can be cumulative. Consider an analogy. Suppose you owned the best hockey team in the NHL and suppose you traded away your best player every year. What would happen to your hockey team over time? By taking away the best, you leave fewer skills and a less competitive, less stimulating environment for everybody. Even the average players would deteriorate in quality.

This could happen to our universities. This is why our universities are trying to prevent the salaries of professors from declining further. We can not afford to lose the competition for the best people to teach and do research.

"Holidays at taxpayers' expense"?

People sometimes imagine that every professor has a paid holiday every six or seven years, when he or she lies on a beach in Spain or Greece at taxpayers' expense. This is not the case.

The general "Terms and Conditions" of employment for professors are a matter of public record. You may see a copy of this document by visiting the Personnel Office or the Faculty Association at your university.

A professor who has survived the initial probationary period normally may apply for a year's "study leave" if, and only if, he or she has completed six years of full-time teaching. Study leave means that the professor may be excused from teaching duties for a year, in order to concentrate on research.

Remember that one of the most important parts of the work of professors is doing research, discovering new knowledge, and writing up their findings for publication. This helps to maintain and increase the stock of knowledge and skills in Canada from which we all benefit. In addition, it is through this work that a new generation of researchers is trained. If professors did not do this work, we would rapidly lose our capacity to maintain that stock. Professors must have time to do their work, and it is standard practice to give study leave to the best researchers in universities across North America.

To apply for study leave does not mean that you will get it. Professors must satisfy their colleagues and administrators that they deserve study leave. Even when they are granted study leave, professors will be paid only a portion (usually 70-80%) of their regular salary while on leave. Often professors cannot afford to take substantial salary cuts in order to go on study leave. So they apply to a research foundation for a "leave fellowship" — money to make up the loss in salary.

Professors compete with each other for available fellowships. The competition is stiff and many do not succeed. In 1984-85 the Social Sciences and Humanities Research Council evaluated about 700 applications for leave fellowships and approved only 29% of them! Of the 500 who were unsuccessful, many will accept the salary cut in order to do their research. How many Canadians would accept 70% of their salary for a year in order to better perform one of the most important aspects of their job?

Often professors also require research grants to support their research: they may have to travel to use labs or archives elsewhere in Canada or outside the country; they may need to consult with experts elsewhere; they may need to purchase scientific equipment, pay for computer time, hire computer expertise, hire lab assistants, and so on. Funds for research grants are also very limited, and professors must compete for these funds.

Professors must compete with their fellows for the very tools which are essential to their job: they must compete for the time and the research grants which are necessary to do research.

When professors complete their study leave, they must submit reports on their research to those who gave them research grants and leave fellowships. If the reports are unsatisfactory, or if the professor does not write works for publication, he or she will have great difficulty securing leave money again.

Competition is a fact of life for professors in our universities, and this is not a bad thing. Professors compete for money, and they compete with others in the quest for knowledge and skills. Unlike many other professional people, professors must compete with their fellows for the very tools which are essential to their job: they must compete for the time and the research grants which are necessary to do research.

"Students have it soft"

People sometimes imagine that students at university "have it soft", that the work is relatively easy, and that professors are not as tough as they used to be. In 1983, students paid only 14.9% of the general operating expenses of Canadian universities from their fees. Are they having a holiday at the taxpayers' expense? Not at all. [11]

There is competition for degrees, and the competition is tough. Earning an undergraduate degree takes between three and five years of hard work in Canada, and the standards are high. Many students drop out before completing their degrees.

Often the B.A. or B.Sc. is only a beginning. Students may go on to take post-graduate training in Education, Engineering, Business Administration, Law, Medicine, Computer Science, or other arts and science subjects. The competition to enter these programs is very stiff, which is one reason why the competition for high marks in the B.A. and B.Sc. programs is so serious. As unemployment rates have risen in recent years, the competition has increased, since students know that their marks are critically important to their future employment prospects. Those who teach in universities know that the students' workload is heavy and the pressure is very great.

In future, the chances of getting a satisfying job — perhaps any job at all — will likely depend increasingly on your level of education.

One professor at the University of Victoria in British Columbia polled 110 students in 3 history classes in 1984 to find out how many hours they spent on their course. Most spent 8 hours or more a week on one course. With a full course load, they would be working at least 40 hours a week. About 20% of them are working 50 hours or more a week. [12] They had no reason to exaggerate because they replied anonymously.

We must also remember that students are not paid a wage or salary to do their work. They are adult workers who agree to postpone wages into the future in order to acquire an education which is of benefit to themselves and to the public.

"Professors have it soft!"

A university professor is a professional person whose job is to teach and to do research.

In order to become a university professor you must spend several years at university acquiring a specialized training as a researcher in a particular field of knowledge. You must first secure a very good B.A. or B.Sc. degree. Then you must apply to do graduate studies in your field of knowledge. If you are accepted, normally you would do a Master's degree, which may take one, two or even three years. You must then apply to a university to take a higher degree, called the doctorate, or Ph.D. This degree usually takes from three to five years. Only the most promising researchers are accepted to do this degree. The doctoral student must pass a series of "comprehensive exams" in his or her field, and then do advanced research. The student will write a thesis based on his research, which will be examined by experts from inside and outside the university. Usually the student must defend the thesis in a public examination. If the committee of examiners is satisfied that the thesis meets the required standards, then the student is awarded the Ph.D. degree.

Many people with Ph.D. degrees find jobs in industry, in government, and in service industries. With a Ph.D. you may apply for jobs as a university professor, but only the best researchers are hired.

If you win the competition for a job, you are placed on probation — usually for a period of 5 or 6 years — one of the longest probationary periods of any job in Canada. Many do not survive this probationary period, either because their teaching performance is judged inadequate, or because they did not publish enough research.

In most departments at Canadian universities, students submit evaluations of courses and of their professor's teaching performance. These evaluations are considered by the professor's colleagues and administrators and salary increases usually depend in part on good teaching.

After the probationary period the professor is evaluated by others in the discipline and by university administrators. Promotion and salary increases depend on these evaluations.

Between the beginning of September and the end of April, professors probably spend at least half their time teaching. They may spend about nine hours a week in the classroom; they must prepare lectures (a one hour lecture may take several hours to prepare); they must mark essays, exams, lab reports, and other work by their students; they must spend several hours a week consulting with students individually; they must spend time in meetings and doing administrative work. In addition, professors must continue to do research and to write, since the production of new knowledge is part of the professor's basic duty.

The work of professors, like the work of their students, is task-oriented. But there can be few professors who work as little as 40 hours a week. No professor gets 4 months' holiday a year, as some people seem to think. During the summer professors must continue to do research and to write. A professor is usually entitled to four weeks' holiday a year. Many take shorter holidays or none at all.

Why would anybody want to go into this profession? The answer is simple: learning and teaching are in themselves immensely satisfying. Researchers *like* what they do. Usually they cannot imagine doing any other work. They also believe that their work is important for Canada.

"...But they get such huge salaries!"

In Canada professors are paid less than other professional people with comparable training. Professors are paid less than doctors, lawyers, engineers, or many senior civil servants.

Professors start earning regular salaries later than most other working people, because of their long training. While completing their training they receive little or no remuneration. Thus they are at a disadvantage compared to private sector employees, who may earn salaries or wages from the beginning of their training. Many professors also have a sizeable student loan to repay after they begin working.

When professors begin earning salaries, their pay will be low. Table 3 compares salaries in various professions in Canada in 1982.

The cumulative lifetime earnings of professors will be well below earnings in other professions. If we average the annual salaries of various workers over a normal working lifetime (using 1979 figures) we find that professors earned an annual average of $21,431 in 1979 dollars to retirement at age 65. This compares to the following lifetime annual averages: Lawyer — $44,706; Accountant — $35,792; Engineer — $25,717; Carpenter — $23,039; School teacher — $22,648.[13]

In the last 15 years, professors' salaries have declined in terms of real purchasing power. They have also fallen behind other wage earners in Canada. In 1985 the average Canadian professor's salary in real dollars was worth $710 *less* than it was in 1983, and $1683 *less* than it was in 1971.[14]

An average worker in Canadian industry earned a salary worth $2105 *more* in 1983 than in 1971. Between *1971 and 1983, the real personal income per employee* in Canada increased by 24.6%.[15] Therefore, in terms of real purchasing power, the average professor has lost about 3.6% of his or her salary since 1971, while the average industrial worker has gained 9.6%, and the average employee 24.6%.

If you win the competition for a position as professor, you are placed on probation — usually for a period of five or six years — one of the longest probationary periods of any job in Canada.

The result is that other employers can offer both job satisfaction and higher salaries. Some of our very best professors and researchers have left the universities. Perhaps more important in the long run is that many

TABLE 3

STARTING WAGES AND SALARIES IN CANADA, 1982-83

Job	Apprenticeship duration & pay	Starting Annual Pay
Plumber	1 1/2 to 4 yrs.@ 65% to 90% of journeyman wage	$25,740
Letter Carrier	1 year	$24,860
Registered Nurse	2 to 4 years	$22,835
School Teacher (Floor Salary, Averaged over Provinces)	4 years undergraduate	$22,918
Assistant Professor* (Average Floor Salary)	8 years	$24,289

Source: *What Jobs Pay*, Paul Aniseff and Etta Baichman, Hurtig Publishers, Edmonton
* Statistics Canada, Cat. 81-2585

TABLE 1

OPERATING GRANTS TO UNIVERSITIES AND COLLEGES FOR 1984-85, BY PROVINCE

Province	Grant ($ thousands)
Newfoundland	91,033
Prince Edward Island	19,686
Nova Scotia	159,541
New Brunswick	117,695
Quebec	1,844,006
Ontario	1,691,185
Manitoba	172,473
Saskatchewan	187,019
Alberta	539,509
British Columbia	462,269

Source: Johnson, A see reference 1.

of the musician and the mathematician? And how does one measure the benefit of a poem or a painting? The returns from such investments cannot be measured in dollars alone. This does not mean, however, that the returns do not exist.

The returns which you receive are around you, as you read this. The car which you drive was built from the designs of engineers; the engineers were trained in universities and took much of their knowledge from physicists, chemists, and mathematicians. The house in which you live could not have been built without the work of engineers and scientists and managers hired by the many companies which produced the materials to build the house. Many of the people who give you the news and entertainment in newspapers or on television learned their skills, their literacy, and their journalism in our universities.

When we invest in universities, we are investing in knowledge, in skills, in arts, in science, and in *technology*.

Doctors and nurses give you health care, but they could do nothing without the knowledge of biochemists, biologists, psychologists, and pharmacologists — all of whom are trained in your universities. In schools your children and grandchildren are taught by teachers whose knowledge comes from people in universities — from historians, sociologists, political scientists, philosophers, and scientists.

Economic growth depends increasingly on technological advances and innovations, and on a highly skilled work force. This is why the state of California increased its financial contributions to the University of California and to the California State University system by more than 37% in the past two years.

This is why the United States as a whole send 33% of their high school graduates into universities or colleges. This is why Japan sends more than 63% of its high school graduates into universities, colleges, technological institutes, vocational schools, and schools of art.[2]

In Canada we send less than 24% of our 18-24 year olds to college or university, and we invest about 2.1% of our GNP in Post-secondary education. This is much less than our major trading partner, the United States[3].

The Treasurer of Ontario stated in a 1984 report that one of the reasons for higher productivity in the United States was the larger proportion of people with post-secondary education. [4]

Education is an investment

Investing in skills in the labour force has contributed significantly to economic growth in the past. For instance, the increasing educational attainment of workers in Canada between 1926 and 1956 "directly led to the rate of growth of GNP being ... higher than it otherwise would have been"[5]. In terms of dollars in 1985, that added nearly $750 million to the Canadian economy.

In the United States, it has been estimated that over 40% of the growth in the productivity per worker between 1929 and 1957 was the result of educational development. [6]. Those advances would have been impossible without the universities.

You do benefit from the skills and the knowledge in the labour force as a whole. Some of those skills, and that knowledge, come from high school and technical colleges. But they come also in unique ways from universities, where the high school teachers and the college instructors acquired their knowledge.

Economic growth depends upon our having a skilled labour force, and upon our having managers, scientists, technologists, and economists who can work with — and compete with — such people in other countries. We rely on them to make wise decisions, based on a broad understanding of our society and its roots. We invest in the universities — and these people are the returns on our investment.

TABLE 2

GROWTH OF JOBS IN CANADA, 1971-1981

Type of Job	%Increase
Social sciences, law and related	139%
Managerial, administrative and financial	119%
Sciences, Engineering	72%
Medicine and Health	59%
White collar*	52%
Teaching	40%
Blue collar**	34%

* Mainly clerical and sales.
** Service, farming, fishing, machining, fabrication, mining, processing, construction, transportation.

Source: Statistics Canada Publication no. 92-920.

"Young people need jobs, not books!"

Our children, even if they do not go to university, benefit from the economic growth to which education contributes.

Our young people, if they do go to university, will have a better chance of finding a job. And they will have a better chance of finding a job with both a high income and job satisfaction.

With a university degree or college diploma, a young person is less likely to be unemployed. In Canada in 1983, only 5.2% of people with university degrees were among the officially unemployed; only 8.9% of those with college degrees were unemployed. But 13.9% of those with high school graduation only were unemployed. [7] Taking into account the "planned" unemployment of people changing jobs, a high school graduate is more than 8 times more likely to be unemployed than a university graduate.

According to the 1981 census, Canadians with a university degree earned an average of $22,995 a year. The average income for people with no university education was $12,328 a year. [8] In future the chances of getting a satisfying job — perhaps any job at all — will likely depend increasingly on your level of education. Table 2 shows that jobs requiring university or college education grew much more rapidly in Canada in the 1970s than did other jobs. Such jobs exist mainly for a minority in our population, but a growing minority.

Here is what Dian Cohen wrote recently in *McLean's:*

> The choice that faces Canadians is whether to mortgage the future to the digging of ditches or to the use of our brains. It's crucial that we give at least equal weight to megaprojects based on the information age premise that people are the wealth of the economy, as we do to those projects that are still hooked on the industrial-age belief that natural resources will make us rich. [9]

What's in it for my community?

Most of the university's money is spent in the local economy. Those who work in the university buy or rent housing and purchase many other things from local business. The university itself purchases a wide variety of goods and services locally. Typical of the impact this has is the following example for Fredericton, N.B.[10]

There are about 6,000 full time students at the University of New Brunswick's Fredericton campus. In 1981-82, students spent over $23 million there. The university attracts many visitors and conferences. In that same year, people visiting the university accounted for over 25,000 visitor-days and spent close to $2 million. In 1981-82 no less than $60 million of spending originated in the university. The "multiplier effect" — the further increase in income in the community because each dollar is re-spent — adds another $54 million to this.

The total economic impact of the university came to nearly $2500 per resident of Fredericton in that year. Jobs directly and indirectly related to the operation of the university total more than the jobs in any other firm or institution in the city other than the provincial government. The picture is the same in many other university communities across Canada.

THE UNIVERSITY: WHO NEEDS IT?

PHOTO — JIM BANHAM

The ivory tower?

A university is a community of people who come together to teach and to learn. A university is not just a collection of buildings, books, and labs, separated from the rest of the world by trees and boulevards.

The universities belong to you, the taxpayers of Canada. They are public places, and you may visit any time.

What will you find in your university? What is it for? In 1984/85 the taxpayers maintained some 70 universities across Canada. What did we receive from our investment?

Before we can answer, we must remember that university people are part of society, even while they work or study in their university. They contribute directly to the economy, to the arts and sciences, and to the life of the community outside the university. Without our universities, our communities would be very different places.

A costly luxury?

Education is an investment. In 1984-85 taxpayers paid $5,285 million for the operating costs of the universities and colleges in Canada[1]. The figures for each of the provinces are given in table 1.

When we invest in universities, we are investing in people. More precisely, we are investing in knowledge, in skills, in arts, in science and in technology.

The benefits we receive from such investments are very real, although it is difficult to measure the returns scientifically.

How do we measure the returns we receive from the skills of the nurse and the doctor, or from the talents

The University: Who Needs It? is a special publication of the Canadian Association of University Teachers in celebration of National Universities Week.

fesseurs en matière de recherche offre plusieurs possibilités d'être objectivée selon des mesures moins orthodoxes que celles que renferme le discours patronal habituel. Voyons, à titre exploratoire, comment on pourrait y parvenir.

Tout d'abord, il importe de savoir que l'acroissement des fonds de recherche entre 1972/73 et 1980/81 a été de 27.1% en dollars constants comparativement à 161% en dollars courants. Sur le seul indice de la simple augmentation déjà constatée des effectifs professoraux durant la même période, il est aisé de se rendre compte que le rendement des professeurs s'est sensiblement accru à ce chapitre.

Considérons ensuite leur implication dans la recherche subventionnée qui, à l'échelle du réseau, peut être grossièrement mesurée grâce aux divers per capita professoraux déductibles des données. Nous soutenons justement que la mesure du travail est plus adéquate si elle se conforme à cette procédure méthodologique. Prenons ainsi l'exemple de l'indicateur de recherche fourni par le ratio "projets/professeur". Le tableau (III) montre l'évolution de ce ratio durant presque la même période:

L'évolution du ratio d'implication montre un relative stabilité qui semble vouloir accuser une tendance à la hausse depuis 1977/78. Même si en 1980/81 on en est à un niveau à peine supérieur à celui, exceptionnel, de l'année 1973/1974, la comparaison de l'accroissement du nombre de projets, de l'ordre de 28.1%, avec celui du nombre de professeurs-chercheurs, de l'ordre de 16.8%, sur la même période de temps soit 8 ans, se fait nettement à l'avantage de ceux-ci.

TABLEAU 3

Ratios d'implication et de dispersion dans la recherche subventionnée. Evolution de 1970/73 à 1980/81*

	1972/73	1974/75	1976/77	1978/79	1980/81	$\Delta = \frac{1980\text{-}81}{1972\text{-}73} \cdot 1$
A nombre de projets	4 032	3 504	3 960	4 689	5 163	.28
B nombre de professeurs-chercheurs*	6 275	6 662	7 122	7 146	7 330	.17
ratio d'implication A ÷ B	.64	.53	.56	.66	.70	—

Source: M.E.Q. (D.g.e.r.u.) *La recherche subventionnée et commanditée dans les universités du Québec* (rapports annuels).
*Pour les années manquantes, les données peuvent être obtenues chez les auteurs.
**Cet effectif comprend les professeurs-chercheurs et les directeurs (E + R) mais exclut les professeurs en congé sabbatique et en congé d'études.

En clair, cela veut dire qu'il y a de plus en plus de professeurs qui s'impliquent dans la recherche subventionnée, abstraction faite là encore, des variables les plus influentes comme l'inégalité des disciplines, "l'entrepreneurship" individuel ou le standing de l'établissement. Ce ratio d'implication donne la mesure, bien que partiellement, de l'emprise du travail de recherche sur l'ensemble des activités reliées à la tâche professorale.

Conclusion

Nous sommes ainsi d'avis que la récupération par les technocrates des outils statistiques empruntés à la théorie du financement universitaire à d'autres fins, telle l'évaluation de la tâche tout particulièrement, ne peut conduire qu'à des aberrations. Mais au-delà de cette manoeuvre patronale, il importe de définir la nature de l'initiative syndicale. En particulier, il convient d'apporter une réponse aux questions suivantes:

1) Est-il possible et souhaitable de parvenir à une certaine forme de consensus des professeurs syndiqués sur une perspective aussi "organique" de la tâche que celle qui sous-fend le modèle du "métier d'universitaire" que nous proposons?

2) Même crédités de l'initiative souhaitable, les professeurs et leurs syndicats ont-ils la volonté et sont-ils assez mobilisés pour tenter d'infléchir le rapport de force actuel en vue de faire dominer *leur* conception de la tâche professorale?

3) Quelles dispositions prendre pour continuer à approfondir sereinement le cadre de réflexion autour duquel pourrait graviter le débat tout en essayant d'éviter les affrontements stériles?

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Les auteurs de cet article sont des professeurs à l'université du Québec à Montréal.

TABLEAU 2

La triple mesure de l'enseignement dans les universités du Québec*

		1973/74	1974/75	1975/76	1976/77	1979/80	1980/81	1981/82	$\Delta = \frac{1981\text{-}82}{1973\text{-}74} \cdot 1$
I	nombre de cours	31 351	27 825	29 405	30 850	32 710	34 334	33 776	+ 7.7%
II	nombre d'inscriptions	963 742	945 246	966 398	1022 251	1110 283	1214 419	1212 663	+25.8%
III	nombre de crédits	83 806	91 335	95 942	105 247	102 182	107 045	106 081	+26.6%
IV	nombre d'inscriptions par cours	30	34	33	33	33.9	35.4	35.9	+19.6%
V	nombre de cours/ prof. rég.	4.57	3.92	3.93	4.03	4.12	4.24	4.13	—
VI	nombre de cours/prof. en exercice	5.56	4.70	4.79	4.99	5.18	5.50	5.36	—
VII	nombre de crédits/prof. régulier	12.2	12.9	12.7	13.7	12.9	13.2	13.0	—
VIII	nombre de crédits/prof. en exercice	14.9	15.4	15.5	17	16.2	17.1	16.8	—

*Données non disponibles: 1977/78, 1978/79
Sources: *Relevé des activités d'enseignement dans les universités du Québec*, M.E.Q., (D.g.e.s. 1973-1982).

LUTHER COLLEGE

The University of Regina
Regina, Saskatchewan, Canada

Luther College, a federated college of the University of Regina and a member of A.U.C.C., invites applications for possible (tenure track) appointments in the following areas:

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Salary floors: Lecturer $22,195.
Assisfant Professor $25,934.
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Applications including curriculum vitae and fhe names of three references are fo be sent to Dr. Roland E. Miller, Academic Dean, Luther College, University of Regina, Regina, Saskatchewan, Canada S4S 0A2. Closing date for receipt of application: date when positions are filled.

Coordinator, Native Studies

Athabasca University is e publicly funded institution specializing in distance education. We ere currently delivering courses to native students both on a home studies basis and through seminar enhanced delivery.

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Quelifications: Graduate degree in relafed discipline (Ph.D. preferred); experience in working wifh native organizafions; and involvemenf in native educafion. Fluency in a nafive language is a disfinct assef.

Salary: $32,240 fo $43,813 per annum. Tenure frack, assisfanf professor level.

Please submit curriculum vitee end have three letters of references sent in support of your epplication by October 31, 1985 to:

D. P. Monk, Director of Personnel, Athabasce University, Box 10,000, Athebasce, Alberta, T0G 2R0

Athabasca University

DALHOUSIE UNIVERSITY

FACULTY OF DENTISTRY

DEAN

The current term of the Dean of the Faculty of Dentistry comes to an end in June 1986. Persons interested in applying for this position should write to the Chairman of The Committee To Advise The President On The Appointment Of A Dean giving full details of teaching, research and administrative experience and including names of referees who can be contacted by the Committee.

The Faculty of Dentistry is made up of nineteen departments and divisions, a School of Dental Hygiene as well as a Graduate Program in Oral and Maxillofacial Surgery and a Post-Graduate Program in Periodontics. The Dean is expected to provide academic leadership to the Faculty, and is responsible to the President for appointments, promotions, tenure and budgetary matters relating to the Faculty.

All replies will be treated in confidence. Replies should reach the Chairman no later than October 31, 1985.

Dalhousie is an equal opportunity employer.

Under current Canadian Immigration regulations, this advertisement is directed in the first instance to Canadian citizens or landed immigrants.

Dr. D.G. Pentz
Chairman
Committee To Advise The President
On the Appointment of a Dean,
Faculty of Dentistry
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Faculty of Dentistry
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DIRECTOR

Centre for Canadian — American Studies

The University of Windsor invites applications for the position of Director of the Centre for Canadian-American Studies. The director will provide dynamic leadership for the Centre's programs in order to enhance its long established presence at the University.

Since 1959, the Centre's prestigious annual Can-Am Seminar has attracted international experts to its unique forum for the discussion of social, political and economic issues of mutual interest to Americans and Canadians. In addition to publishing the Seminar's proceedings, the Centre publishes research papers on issues of Canadian-American relations and encourages faculty and student research in the field.

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The University of Windsor is a full service university (with an enrolment of 8,000 full-time and 4,500 part-time students) offering graduate and under-graduate degrees in nine faculties and six schools. Situated in Canada's southernmost city of Windsor, Ontario, directly on the international border across the river from Detroit, Michigan, the University enjoys an ideal geographical location for promoting the work of the Centre for Canadian — American Studies. The University is an equal opportunity employer.

The position is available January 1, 1986.

Apply in writing to:
Dr. R.W. Ianni,
President,
University of Windsor,
Windsor, Ontario
N9B 3P4

University of Windsor

PROMESSES 1

gressiste-conservateur a déclaré qu'il "était résolu à maintenir l'engagement financier actuel du gouvernement fédéral, selon la formule établie dans l'entente de 1977." L'entente de 1977 sur le Financement des programmes établis vise à assurer un financement de base adéquat aux universités (ainsi qu'au milieu hospitalier et à l'assurance-maladie) et dépend de la collaboration et des contributions des deux paliers de gouvernement.

L'ACPU insiste sur le fait que les programmes de recherche universitaire ne peuvent être réalisés que grâce à un financement général des universités. Les subventions à la recherche ne couvrent pas l'entretien général des universités, l'approvisionnement des bibliothèques, le traitement des professeurs et l'aide financière aux étudiants, éléments qui sont tous des instruments necessaires à la recherche.

L'ACPU s'attache présentement aux projets d'expansion des deux conseils subventionnaires afin de mesurer l'appui du gouvernement au financement de la recherche. Les plans quinquennaux du Conseil de recherches en sciences naturelles et en génie (CRSNG) et du Conseil de recherches en sciences humaines (CRSH) sont entre les mains du gouvernement. On s'attend à ce que des décisions prises à cet effet soient annoncées à l'automne.

Les trois conseils subventionnaires, soit le CRSNG, le CRSH et le Conseil de recherche médicales, sont les principales sources d'appui à la recherche universitaire. "Le sort de leur budget indiquera clairement aux chercheurs universitaires si le gouvernement s'intéresse ou non à l'inclusion des universités dans un programme de recherche et de développement au Canada", déclare l'ACPU.

"Si les universités ne peuvent prendre part à la recherche et au développement à cause d'un manque de fonds, d'où viendront alors les personnes compétentes qui pourront assumer ces tâches et quelle sera la proportion de la recherche réellement effectuée?"

Pressant le gouvernement d'agir "en proposant aussi tôt que possible un programme d'appui aux universités qui soit généreux et cohérent", l'association a ainsi présenté un schéma directeur d'action positive. Elle exhorte le gouvernement à adopter les mesures suivantes:

• adopter le plus tôt possible les plans quinquennaux du CRSNG et du CRSH qui ont été proposés;
• maintenir le financement du Conseil de recherches médicales selon le programme actuel;
• réviser les propositions de ministères fédéraux tels que les Transports, l'Énergie, l'Agriculture, les Pêches et l'Environnement visant à diminuer le nombre des contrats de recherche accordés aux universités;
• payer avec des fonds nouveaux les coûts indirects de la recherche financée par les trois organismes subventionnaires;
• donner suite à des promesses précédentes du Parti progressiste-conservateur de fondre les subventions "supplémentaires" actuelles en un budget de base permanent pour chaque conseil. L'année dernière, le Conseil de recherches médicales a dû laisser 100 chercheurs dans l'attente pendant des mois avant de connaître la décision à l'égard du budget "supplémentaire" de 30 millions de dollars;

• mettre en oeuvre les recommandations de M. A.W. Johnson au Secrétaire d'État, soit 1) l'adoption de budgets de cinq ans plutôt que d'un an pour les trois organismes subventionnaires, 2) une augmentation des fonds de ces derniers, et 3) une étude des gouvernements fédéral et provinciaux ainsi que de représentants du secteur universitaire visant à déterminer l'acceptabilité de la proposition de M. Johnson de consacrer 250 millions de dollars de fonds nouveaux aux centres d'excellence;

• aider les universités à mettre sur pied de nouveaux programmes de collaboration avec l'industrie dans le domaine de la recherche et à améliorer ceux déjà existants;

•soutenir les universités et leur venir en aide dans leurs travaux en sciences sociales et humaines;

• donner suite à l'engagement du Parti progressiste-conservateur de ne pas diminuer les fonds transférés aux provinces au titre de l'enseignement postsecondaire, tel qu'établi en détail dans la Loi sur le financement des programmes établis. En 1985-86, il est prévu que 2,2 milliards de dollars en espèces et 2,3 milliards de dollars en points d'impôts seront transférés aux provinces.

• accepter la recommandation du Comité parlementaire présidé par le député James A. McGrath de créer un Comité parlementaire permanent sur la recherche, les sciences et la technologie.

COUNCILS 1

of the leap in the volume of defence research being carried out in the United States. The Association says that "unless steps are taken to ensure that there is a viable and well-financed research and development policy in this country, and one which includes a significant and active component within the universities," the buildup of defence research in the U.S., coupled with the continuing high demand for highly trained personnel, will "escalate a drain to that country".

The CAUT says that many powerful voices, including that of the present Prime Minister, have spoken out in recent years for support of research and development.

In a March 1984 speech at the University of Toronto, Prime Minister Mulroney pledged that Canada would reach a goal of 2.5% of GNP on expenditures on research and development — a policy long supported by university researchers, says the Association. And in his book *Where I Stand*, Mr. Mulroney argued that the then Liberal government's 6 and 5% restraint program should not be applied to research and development.

In 1983 the Royal Society of Canada, in a statement of national concern on the underfunding of the universities in science and technology, urged that university research funding be given national priority.

"If we in Canada fail to do so," the Society said, "we will continue to erode our existing important research base in science in the universities and we will compromise our future in science and technology in Canada."

The CAUT also referred to a 1985 report by Dr. A.W. Johnson on the problem: *Giving Greater Point and Purpose to the Federal Financing of Postsecondary Education and Research in Canada*. Dr. Johnson recommended that the granting councils be put on effective five year budgets instead of annual ones and that these be increased over the next five years — recommendations strongly supported by the CAUT.

PROMISES 1

or not the federal government is seriously interested in seeing the universities as part of a dynamic research and development program in this country," the CAUT said.

"If the universities cannot participate through lack of funds," it said, "it is hard to see where the qualified persons will come from to do the research and development and how much of that research will, in fact, be done."

Calling on the government "to introduce as soon as possible a coherent and generous strategy for funding university research", the Association offered a blueprint for positive action to this end. It urged the government to adopt the following measures:

• implement the proposed Five-Year Plans of NSERC and SSHRC as soon as possible;
• maintain the funding of the Medical Research Council according to the present plan;
• review the plans of the federal departments such as Transport, Energy, Agriculture, Fisheries and the Environment to cut back contract research undertaken in the universities;
• pay the indirect costs of research funded by the three granting councils from new money.
• implement previous promises of the Progressive Conservative Party to build in current "supplementary" grants into one permanent base budget for each Council. Last year the Medical Research Council had to put 100 researchers on hold for months while waiting for a decision on the fate of the $30 million "supplementary" budget;
• implement the recommendations of Dr. A.W. Johnson to the Secretary of State for (1) effective five-year instead of annual budgeting for the three granting councils, (2) an increase in their funds, and (3) a study by the federal and provincial governments with the representatives of the university community of the merits of his proposal to spend $250 million in new money on centres of research excellence;
• assist the universities to develop current and new programs for the interaction of the universities and industry in research;
• sustain and develop the work of the universities in the social sciences and the humanities;
• implement the pledge of the Progressive Conservative Party to maintain the funding level of the funds transferred to the provinces for postsecondary education as detailed in the Established Programs Financing Act. This involves the transfer for 1985-86 of $2.2 billion in cash to the provinces and tax points valued at $2.3 billion;
• implement the recommendation of the Parliamentary Committee chaired by the Hon. James A. McGrath, M.P., for the creation of a Standing Parliamentary Committee on Research, Science and Technology.

MACDONALD 3

excellence. The CAUT favours the payment of the indirect costs of research but says the support should come from new federal money.

The CAUT and the Commission agree on one point. Both recommend the creation in the tax structure of a registered educational leave savings plan which would provide a tax shelter for those who wish to save for further education.

The CAUT Board will be reviewing CAUT policies in the light of the Commission's report at its November meeting.

IN/PRINTS

Books received by The Bulletin. Unless otherwise noted, information was supplied by the publisher. Some books may be reviewed later.

DOMINION OF DEBT: Centre, Periphery And The International Economic Order, R.T. Naylor, Black Rose Books, Montreal, 1985. Ten essays analyzing such topics as the effect of international investment on Canada, the political economy of federalism, and the impact of Reaganism on international financial relations. The author teaches at McGill.

THE NUCLEAR POWER GAME, Ronald Babin, Black Rose Books, Montreal 1985. Behind the Canadian nuclear industry, this book argues, lies the emergence of a new power elite which is attempting to use its monopoly on certain kinds of technical knowledge to rule over the development patterns of Canadian society. The author is a researcher at Université de Montréal.

Advertising and censure

CAUT will carry advertisements from censured universities at the first and second stages of censure only. CAUT refuses ads from universities at the third stage of censure because the Council explicitly recommends that members not take positions at an institution at this stage of censure.

Positions available Positions disponibles

Publicité et Censure

L'ACPU accepte les annonces des universités frappées de la censure. L'ACPU refuse les annonces des universités à la troisième étape de la censure parceque le Conseil recommande explicitement aux membres de ne pas accepter un poste à une université qui en est à cette étape.

ADMINISTRATIVE POSITIONS

UNIVERSITY OF SASKATCHEWAN. Colleges of Medicine. The College of Medicine, University of Saskatchewan, is seeking applications for the position of Head, Department of Anaesthesia. Associated with the headship will be a tenured academic appointment. The successful candidate will be expected to provide administrative direction to a department consisting of approximately 20 faculty members, encompassing both Saskatoon and Regina, and to provide academic leadership in undergraduate teaching, postgraduate teaching, research and service. The appointment will be at a level commensurate with qualifications and experience, in accordance with Canadian immigration requirements, this advertisement is directed to Canadian citizens and permanent residents. Please send application, including curriculum vitae and names of 2 referees, to: I.M. McDonald, M.D., Dean of Medicine, University of Saskatchewan, Saskatoon, Sask., S7N 0W0.

UNIVERSITY OF ALBERTA. Dairy Processing Technology Research - vacancy for new Chair. The Food Science Department, University of Alberta, is accepting applications for the position of Dairy Processing Technology Research Chair. Included in this Chair are the responsibilities of Director of the Alberta Dairyman's Association Research Unit (ADARU). The appointment will be made at the rank of Assistant Professor (salary from $30,316.) or Associate Professor (salary from $38,170.) depending on experience and qualifications. The initial appointment will be made for a five year term and will be renewable. The successful candidate will be expected to develop a vigorous program in Dairy Processing Research and be able to attract research funds. Some research funds are already in place to assist the Appointee develop his/her programs. In addition, the Chair will be expected to develop a strong interaction with the Provincial Dairy Industry. Minimum qualifications are a Ph.D. in Dairy or Food Science (or related field), with industrial experience highly desirable. Apply before November 30, 1985 to the Chairman, Food Science Department, University of Alberta, Edmonton, Alberta, T6G 2P5, (403) 432-5188. The University of Alberta is an equal opportunity employer but, in accordance with Canadian immigration requirements, this advertisement is directed to Canadian citizens and permanent residents.

THE UNIVERSITY OF ALBERTA. Faculty of Dentistry. Applications are invited for a full-time position as Chairman of the Division of Biomaterials. Candidates must have graduate education and teaching experience in Biomaterials. Preference will be given to candidates with a dental degree. Rank and salary are commensurate with education and experience of an Assistant Professor ($30,316 - $43,780), Associate Professor ($38,170 - $55,450) or Professor (minimum of $48,970). Clinical applicants should be eligible for licensure in the Province. Opportunity to develop major research group with improved funding of research scholars from the Alberta Heritage Foundation for Medical Research. The University of Alberta is an equal opportunity employer. In accordance with Canadian immigration requirements this advertisement is directed to Canadian citizens and permanent residents. All inquiries should be forwarded by December 31, 1985 to: Dr. K.W. Hinkelman, Chairman, Department of Restorative Dentistry, Faculty of Dentistry, University of Alberta, Edmonton, Alberta, Canada, T6G 2N8 - (403) 432-5849.

ACCOUNTING

McMASTER UNIVERSITY. Faculty of Business. McMaster University invites applications for a joint position as Research Associate of the Accounting Research and Education Centre and part-time Lecturer or Assistant Professor of Accounting. The Centre was recently established with funding from McMaster University and the Certified General Accountants Association of Ontario. Duties will include teaching accounting and/or finance, and active participation in academic research projects funded by the Centre and by outside sources. Qualifications include a Master's degree or Ph.D. in accounting or finance. Because of the research component of the position, applicants must have an excellent background in economics, statistics and finance. Salary commensurate with experience and qualifications. Starting Date July 1 or September 1, 1986. Closing date for applications: January 1, 1986. Applicants should send a complete curriculum vitae (including names of references), and official copies of university transcripts to: James C. Gaa, Chairman, Accounting Area, Faculty of Business, 1280 Main Street West, Hamilton, Ontario, L8S 4M4.

ANTHROPOLOGY

YORK UNIVERSITY. Faculty of Arts. Department of Anthropology. Tenure-track position in Socio-Cultural Anthropology, Assistant Professor level, beginning September 1986 (budget permitting; pending senate approval). Completed Ph.D. required with strong general training in the discipline, proven publication and research record, and effective teaching skills at the undergraduate and graduate levels. Specializations preferred are one or more of the following: anthropology of Social Control & Public Policy; anthropological Study of Bureaucracy, Industry and Work; anthropology of Aging. In the context of these specializations: semiotic anthropology and humanistic anthropology. Letter of application, curriculum vitae and names of 3 referees should be sent to: Gerald L. Gold, Chair, Department of Anthropology, York University, North York (Toronto), Ontario, M3J 1P3. Deadline for applications, December 20, 1985. In accordance with Canadian immigration requirements this advertisement is directed to Canadian citizens and permanent residents.

ART

NOVA SCOTIA COLLEGE OF ART AND DESIGN. Art. Instructor in Painting, a spring semester sessional appointment January 1 to April 30, 1986. To teach introductory and intermediate level painting classes, drawing classes and instruct advanced studio level students. Candidates should have teaching experience; a recent exhibition record; an M.F.A. or equivalent professional experience. Address letter with resume and names of references no later than November 1 to The Dean, Nova Scotia College of Art and Design, 5163 Duke Street, Halifax, Nova Scotia, B3J 3J6. In accordance with Canadian immigration requirements, this notice is directed to Canadian citizens and permanent residents.

ASTROPHYSICS

UNIVERSITY OF TORONTO. Canadian Institute For Theoretical Astrophysics/Institut Canadien D'Astrophysique Theorique. Research Fellowships CITA is a national centre for theoretical astrophysics located at the University of Toronto. The Institute expects to award several research fellowships with a starting date of September 1, 1986. The appointments will be for two or three year terms, with the possibility of renewal. Salaries will be commensurate with qualifications and research experience since the Ph.D. degree, and may accordingly (in some cases) be higher than the usual postdoctoral rate. Fellows are expected to carry out original research in theoretical astrophysics under the general supervision of the permanent faculty, or visitors to CITA, whose interests include cosmology, interstellar matter, nuclear and relativistic astrophysics, stellar structure and galactic and solar system dynamics. Applicants should send a curriculum vitae and statement of research interests, and arrange for three letters of recommendation to be sent to: Director, Canadian Institute for Theoretical Astrophysics, McLennan Physical Laboratories, University of Toronto, Toronto, Ontario, M5S 1A1, Canada. Application deadline is January 1, 1986. In accordance with immigration regulations, portions of this advertisement are directed in the first instance to Canadian citizens or permanent residents, but all qualified candidates are encouraged to apply.

BIOCHEMISTRY

UNIVERSITY OF ALBERTA. Department of Biochemistry. Applications are invited for a Research Associate in the field of Macromolecular Crystallography. This position is available immediately and is long-term, renewable on an annual basis. Currently funds are available for a 4 year period. Candidates should have a doctoral degree in crystallography and should have 2-3 years postdoctoral experience in protein crystallography. Salary will be commensurate with the applicant's training and starts at $24,825.00 for 3 years post-Ph.D. experience. Research in the area of proteins involved in muscle contraction and enzymes involved in the control of blood pressure is being conducted in the laboratory. A well equipped environment for the execution of protein structure research is available and includes interactive molecular graphics, and an area detector that will soon be implemented for data collection. Applications, including a detailed curriculum vitae, list of publications and the names of three references should be sent to Dr. M.N.G. James, Department of Biochemistry, University of Alberta, Edmonton, Alberta, Canada, T6G 2H7, by December 1, 1985. The University of Alberta is an equal opportunity employer but, in accordance with Canadian immigration requirements this advertisement is directed to Canadian citizens and permanent residents of Canada in the first instance.

UNIVERSITY OF ALBERTA. Biochemistry. A position of Research Associate is available in the Department of Biochemistry, Faculty of Medicine, University of Alberta, to work on the Structure and Function of Membrane Proteins. Applicant must have a Ph.D. in Biochemistry with at least two years postdoctoral training experience in Protein Chemistry, Membrane Biochemistry and Computing is essential. Stipend ($24,825 - $30,000) dependent upon qualifications. The application deadline is January 1, 1986; the appointment to be effective July 1, 1986. Please send curriculum vitae, reprints of publications and the names of three referees to Dr. R.A.F. Reithmeier, Department of Biochemistry, University of Alberta, Edmonton, Alberta, T6G 2H7. In accordance with Canadian immigration requirements, this advertisement is directed to Canadian citizens and permanent residents.

UNIVERSITY OF TORONTO. Banting and Best Department of Medical Research. Applicants are invited for a postdoctoral fellow position to join an active group working on the molecular mechanisms of cell-cell interactions. Current projects include cloning of cell adhesion genes, monoclonal antibodies, targetted at the active site of these molecules, and studies relating to signal transduction. Applicants should have strong background in molecular biology or cell biology. Send curriculum vitae and names of 3 referees to Dr. C. H. Siu, C.H. Best Institute, University of Toronto, 112 College Street, Toronto, Ontario, M5G 1L6.

BIOLOGY

UNIVERSITY OF GUELPH. Environmental Biology. Integrated Pest Management Position. Applications are invited for a tenure-track position, at the Assistant or Associate Professor level, in Integrated Pest Management in the Department of Environmental Biology, Ontario Agricultural College, University of Guelph. In making this appointment, the department wishes to initiate a new, non-thesis graduate program in integrated pest management leading to the degree of Master of Agriculture. The appointee will be expected to teach a graduate course in integrated pest management, coordinate the teaching for the new graduate degree program and develop a vigorous research program in integrated pest management. Excellent opportunities for research are provided through close cooperation with Agriculture Canada and the Ontario Ministries of Agriculture and Food, Environment and Natural Resources. Applicants should have a PhD and a minimum of two years of relevant experience in integrated pest management. The following areas of specialization will be considered: entomology, plant pathology, or weed science. Qualifications sought will be demonstrated excellence in teaching and research and the potential to develop and direct the graduate program in integrated pest management. The position is available May 1, 1986, contingent upon the availability of funds. Salary will commensurate with experience. Applications, including a complete curriculum vitae, academic transcripts, a statement of research interests, and the names of three references should be sent to: Dr. S.G. McIver, Chairperson, Department of Environmental Biology, University of Guelph, Guelph, Ontario, N1G 2W1. In accordance with Canadian immigration requirements, this advertisement is directed to Canadian citizens and permanent residents. Closing date: December 31, 1985.

MOUNT ALLISON UNIVERSITY. Biology Department. Applications are invited for an immediate postdoctoral position in the field of invertebrate cell biology/biochemistry. The successful applicant will participate in research on arm regeneration and autotomy in echinoderms. The position is for a period of two years at a minimum annual salary of $18,000. Applications will be received until the position is filled. In accordance with Canadian immigration requirements, this advertisement is directed in the first instance to Canadian citizens and permanent residents of Canada. Applicants should send their cv and arrange for two letters of reference to be sent to: Dr. Philip V. Mladenov, Biology Department, Mount Allison University, Sackville, N.B., E0A 3C0 Tel (506) 364-2508.

BOTANY

UNIVERSITY OF TORONTO. Botany. The Department of Botany, University of Toronto (Scarborough Campus) invites applications for a tenure-stream position (Assistant Professor level) in cell biology or molecular genetics. Preference will be given to individuals familiar with recombinant DNA technology. The successful candidate will be expected to participate in undergraduate and graduate teaching and to develop a strong research program. Applicants should, by December 1, 1985, submit a curriculum vitae and have at least three letters of reference sent to Joan E. Grusec, Chairman, Life Sciences Division, Scarborough Campus, University of Toronto, 1265 Military Trail, Scarborough, Ontario, Canada, M1C 1A4. This position will be offered to the best candidate regardless of country of citizenship.

BUSINESS

QUEEN'S UNIVERSITY. School of Business. Applications are invited for tenure-track or tenured positions in Accounting, Production/Operations Management, Management Information Systems and Finance. Qualified applicants in other areas will be considered. Salary and rank will be commensurate with qualifications and experience. Ph.D. (completed or nearing completion) and evidence of strong research and teaching potential are required. Teaching will be at the B.Com., M.B.A., and Ph.D. levels. Applications will be accepted until positions are filled but should be submitted by December 31, 1985. Candidates of both sexes are equally encouraged to apply. In accordance with Canadian immigration requirements, this advertisement is directed to Canadian citizens and permanent residents. Send C.V. and names of three references to: Wm. E. Miklas, Associate Dean, School of Business, Queen's University, Kingston, Ontario, K7L 3N6.

THE UNIVERSITY OF ALBERTA. Faculty of Business. Applications are invited for full-time tenure-track faculty positions from those with teaching and research interests in Accounting, Management Information Systems, Finance, Management Science/Production, and Marketing. Ph.D. or equivalent required or candidate should be at the completion stage of degree. Salary and rank depend on qualifications. Ranges are: Assistant Professor $30,316 to $43,780; Associate Professor $38,170 to $55,450; Professor from $46,970. In addition, merit supplements to ensure competitive offers are negotiable. Appointments normally effective July 1st. Positions subject to availability of funding. Send resume to: Dr. R.S. Smith, Dean, Faculty of Business, The University of Alberta, Edmonton, Alberta, Canada, T6G 2R6. The University of Alberta is an equal opportunity employer.

BUSINESS ADMINISTRATION & COMMERCE

McMASTER UNIVERSITY. Faculty of Business. Applications are invited in the following areas: (i) Accounting, (ii) Finance, (iii) Management Science, (iv) Information Systems, (v) Organizational Behaviour and Personnel, (vi) Marketing and Business Policy. Rank of Assistant, Associate or Professor, depends on qualifications and experience; preferably at the Assistant or Associate level. Visiting appointment is also possible. Ph.D. or DBA degree (completed or near completion) is expected, preferably with teaching and research experience. Duties include research and teaching at both graduate and undergraduate levels. Applicants for Management Science and Information Systems will be expected to contribute to the major field of the Ph.D. program in Management Science/Systems, others to the minor. Applicants in the fields of personnel and organizational behaviour with teaching proficiency in both areas will be given preference. Salary will be commensurate with qualifications, teaching and practical experience. The availability of some positions is subject to budgetary approval. Appointment date is open; July 1, 1986 is preferred. Application date closes when position is filled. Applications should be sent to: Dr. G.W. Torrance, Dean, Faculty of Business, McMaster University, Hamilton, Ontario, L8S 4M4.

McGILL UNIVERSITY. Business Administration. 1. Assistant Professor and Beginning Associate Professor in such functional specialties as Accounting, Finance, Marketing, International Business, Policy, Systems and Computers, Management Science, Organizational Behavior and Industrial Relations. 2. Ph.D. and interest in both teaching and in research. A past publication record essential for appointment at the Associate Professor level. 3. Teaching at the B. Comm. and MBA levels in Day or Evening programs of the McGill Faculty of Management. 4. Salaries competitive with those paid in comparable institutions. 5. Reply to Dr. Laurent Picard, Dean, Faculty of Management, McGill University, 1001 Sherbrooke St. West, Montreal, Que., H3A 1G5. Effective date of appointment - August 1, 1986. Closing date to receive applications - December 15, 1985. In accordance with Canadian immigration requirements, this advertisement is directed to Canadian citizens and permanent residents of Canada.

UNIVERSITY OF NEW BRUNSWICK. Administration. University of New Brunswick, Fredericton, Faculty of Administration invites applications in: Accounting, Finance, Management including Business & Society and Organizational Behavior, Marketing, Quantitative Methods, Management Information Systems, Public Administration overlapping with one or more of the above areas. Qualification for tenure track positions is Ph.D. completed or near completion in appropriate disciplines. Rank is generally Assistant or Associate depending on qualifications and experience, but persons with a very strong record of demonstrated achievement will be considered for the rank of full professor. Some term positions at the rank of Lecturer may be available; qualification a good MBA. Persons with tenured positions elsewhere may apply for visiting appointment. Appointment effective July 1, 1986 or January 1, 1987 as convenient. Successful candidates will teach in BBA and MPA programs and carry out research in their disciplines. Salary is competitive at all ranks. Submit a curriculum vitae and names and addresses of three referees to Dr. K.P.K. Nair, Dean, Faculty of Administration, University of New Brunswick, P.O. Box 4400, Fredericton, New Brunswick, Canada, E3B 5A3.

AD RATES

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SAINT MARY'S UNIVERSITY. Commerce. Assistant/associate prolessor, tenure-track position to begin September 1986 Ph.D or ABD near completion in marketing Preferred teaching areas: Marketing Research, Channels, Marketing Policy. Good publication record required for associate rank. Teaching load is nine hours per semester; Research/publication expected and encouraged. Dynamic MBA and undergraduate programs. Competitive salary, good travel funds. University is publicly funded, enrolment of 4,500. Halifax has an excellent quality of life index In accordance with Canadian immigration requirements, this advertisement is directed to Canadian citizens and permanent residents. Send resumes to Dr Nathan C Kling, Chairman, Department of Marketing, Saint Mary's University, Halifax, Nova Scotia, Canada, B3H 3C3.

UNIVERSITY OF WATERLOO. Business Administration. Accounting - Applications are invited for faculty positions from those with teaching and research interests in (i) financial accounting (ii) managerial accounting (iii) information systems Ph.D or equivalent Salary will depend on qualifications. Appointments effective July 1, 1985 or by arrangement Appointments available until positions filled. Send resumes to Dr. Jack R. Hanna, Chairman, Accounting Group, University of Waterloo, Waterloo, Ontario, N2L 3G1. In accordance with Canadian immigration requirements, this advertisement is directed to Canadian citizens and permanent residents The availability of these positions is subject to budgetery approval It is the intention of the University of Waterloo to fill its vacancies with recent Ph.D. graduates appointed as Assistant Professors wherever possible.

UNIVERSITY OF SASKATCHEWAN. Commerce. Applications are invited for permanent and visiting faculty positions from those with teaching and research interests in Accounting, Finance, Industrial Relations, Management, Management Science, Marketing, and Organizational Behaviour. A Ph.D. or equivalent and strong research interests required for permanent positions Masters and professional credentials acceptable for visiting or limited term appointments. Salary and rank will depend on qualifications. Applications are welcome until positions are filled. Some positions are subject to final budgetary authorization Appointments are normally effective as of July 1 Please send resumes to: Or W.J. Brennan, College of Commerce, University of Saskatchewan, Saskatoon, Saskatchewan, Canada, S7N 0W0.

SIMON FRASER UNIVERSITY. Business Administration. The Faculty of Business Administration invites applications for tenure-track appointments in one or more of the following areas: 1. Accounting; 2. Business Finance, 3. Management Science/MIS; 4. Organization Behaviour. Rank open. Successful candidates must have strong research and teaching abilities for both undergraduate and graduate courses. Ph.D. required or near completion. Be prepared to actively participate in the development of the Faculty. Start date September 1986 (flexible) Candidates eligible for employment in Canada at time of application are preferred. All positions are subject to budgetary approval. Send curriculum vitae and names of three referees to: Appointments Committee, Faculty of Business Administration, Simon Fraser University, Burnaby, B.C., V5A 1S6.

UNIVERSITY OF WINDSOR. Faculty of Business Administration. Full-time (tenure-track or limited term) and sessional positions available in the following fields: (i) Accounting, (ii) Administrative Studies (includes Personnel, IR, management, etc.), (iii) Finance, (iv) Management Science, (v) Marketing and Business Strategy and International Business PhD (or ABD) required for tenure-track positions, MBA acceptable for limited-term appointments. Relevant business, teaching and research experience is desirable Positions involve research and teaching in dynamic undergraduate and MBA programmes. Salary and rank depend on qualifications and are competitive. Send resume to Dr. Eric N West, Dean, Faculty of Business Administration, University of Windsor, Windsor, Ontario, N9B 3P4. In accordance with Canadian immigration requirements, this advertisement is directed to Canadian citizens and permanent residents.

WILFRID LAURIER UNIVERSITY. Business Administration. Applications are invited for teaching positions in the areas of Accounting, Finance, Human Resources, Quantitative Business Analysis and Introductory Policy for the 1986-87 academic year. Qualifications. Lecturer up to Associate Professor. Duties: Undergraduate and/or graduate teaching. Applications accepted until positions filled and are subject to budget approval In accordance with Canadian Immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada. Send applications to: Dr. Bruce Fournier, Associate Dean of Business, School of Business and Economics, Wilfrid Laurier University, Waterloo, Ontario, N2L 3C5.

CHEMISTRY

UNIVERSITY OF TORONTO. Department of Chemistry. The Physical Sciences Division, Scarborough College, University of Toronto, invites applications to a tenure-stream Assistant Professor position in Physical Chemistry or Chemical Physics, to begin July 1, 1986. The appointee will be expected to carry out a strong research programme, including supervision of graduate students and teaching of graduate courses. Undergraduate teaching duties will include responsibility for the laboratory component of the Physical Chemistry programme as well as lecturing in Physical and General Chemistry. Salary will be commensurate with qualifications and experience. This advertisement is directed, in the first instance, to Canadian citizens and permanent residents. Applications should be sent, by November 30th, 1985, to: Professor J.M. Parr, Chairman, Physical Sciences Division, Scarborough Campus, University of Toronto, 1265 Military Trail, Scarborough, Ontario, Canada, M1C 1A4

UNIVERSITY OF TORONTO. ERINDALE COLLEGE. Department of Chemistry. The chemistry department of the University of Toronto invites applications for a tenure-stream appointment in the area of analytical chemistry, effective July 1, 1986. The successful candidate will be expected to teach and to conduct an active research programme at the Erindale Campus. The current base salary for an assistant professor is $27,000 per annum. Candidates with a recent Ph.D. degree and an excellent research record should apply to Professor S.G. Whittington, Chairman, Department of Chemistry, University of Toronto, Toronto, Ontario, M5S 1A1 by November 1, 1985. In accord with Canadian immigration requirements, this advertisement is directed to Canadian citizens and permanent residents

UNIVERSITY OF NEW BRUNSWICK. Chemistry. The Department of Chemistry of the University of New Brunswick, Fredericton, NB, Canada, invites applications for the position of assistant professor in Inorganic Chemistry The applicant should be prepared to pursue an active research and teaching career. Applications from all highly qualified candidates are welcome, however, some preference will be given to those who complement the preparative areas presently represented in the department. In accordance with Canadian immigration requirements, this advertisement is directed to Canadian citizens and permanent residents. The appointment will date from July 1, 1986 or sooner and applications should be sent to: Professor W.V.F. Brooks, Chairman, Department of Chemistry, University of New Brunswick, Bag Service 45222, Fredericton, N.B., E3B 6E2, Canada.

UNIVERSITY OF AUCKLAND (New Zealand). Department of Chemistry. Lectureship in Inorganic Chemistry. Applicants should have a PhD or equivalent qualification. While the Department has strengths in transition Metal Chemistry and now wishes to build strength in some area of inorganic chemistry, applicants with an interest and expertise in any area of inorganic chemistry will be considered Commencing salary will be established within the range $NZ23,622 to $27,928 per annum. All salaries are at present under review. Conditions of Appointment and Method of Application are available from the Assistant Registrar (Academic Appointments), University of Auckland, Private Bag, Auckland, New Zealand. Applications, in accordance with the Method of Application, should be forwarded as soon as possible but not later than the closing date 30 October 1985.

UNIVERSITY OF OTTAWA. Department of Chemistry. Applications are invited for a position in theoretical chemistry, at the post-doctoral or research associate level. Candidates should be familiar with the standard quantum-chemical computer codes, e.g. GAMESS, HONOO, GAUSS, ALIS and have received their Ph.D. in quantum chemistry. Address enquiries to Professor David M. Bishop, Chemistry Department, University of Ottawa, Ottawa, Canada, K1N 9B4

CLASSICS

UNIVERSITY OF VICTORIA. Classics. The Department of Classics, University of Victoria, invites applications for a vacancy at the rank of visiting lecturer for the period September 1, 1985 - April 30, 1987. Candidates should be prepared to teach undergraduate courses in Greek, Latin and Classical Studies. Applicants should send a curriculum vitae to Professor J.G Filch, Acting Chairman, Department of Classics, University of Victoria, P O. Box 1700, Victoria, B.C., V8W 2Y2 by December 15, 1985 and ask three referees to write to him on their behalf. In accordance with Canadian Immigration requirements this advertisement is directed in the first instance to Canadian citizens and permanent residents. The University of Victoria offers equal employment opportunities to qualified male and female applicants.

COMBINATORICS AND OPTIMIZATION

UNIVERSITY OF WATERLOO. Department of Combinatorics and Optimization. Applications are being accepted for the position of Assistant or Associate Professor in the area of Deterministic Operations Research starting July 1, 1986. A recent Ph.D. degree is required and candidates should have proven ability, or the potential, for excellent research in the methodology of Operations Research. The ability to teach effectively at both the undergraduate and graduate levels is required. The candidate should also have interests in the application of techniques of Deterministic Operations Research to problems in business, industry and commerce, and experience in this area is essential. The successful candidate will be encouraged to continue his/her involvement in such applications through research contracts. The appointment is expected to enhance the Department's ability to support education in the area of Operations Research at both the graduate and undergraduate levels. Salary and rank will be commensurate with qualifications and experience. Interested individuals should send resumes and the names of three referees to: Professor P.J. Schellenberg, Chairman, Department of Combinatorics and Optimization, Faculty of Mathematics, University of Waterloo, Waterloo, Ontario, Canada, N2L 3G1. In accordance with Canadian Immigration requirements, this advertisement is directed to Canadian citizens and permanent residents The availability of this position is subject to budgetery approval.

UNIVERSITY OF WATERLOO. Department of Combinatorics and Optimization. Applications are invited for the position of Assistant, Associate or Full Professor in the area of Combinatorics and/or Combinatorial Optimization, effective July 1, 1986. For a senior appointment, the primary criterion for selection will be the quality of the candidate's research accomplishments and the recognition they have received. This excellence in research should be complemented by effective teaching at both undergraduate and graduate levels. For a junior appointment, selection will be based on the potential for excellence in research and teaching Salary and rank will be commensurate with qualifications and experience. Interested individuals should send resumes and the names of three referees to Professor P.J. Schellenberg, Chairman, Department of Combinatorics and Optimization, University of Waterloo, Waterloo, Ontario, N2L 3G1. In accordance with Canadian immigration requirements, this advertisement is directed to Canadian citizens and permanent residents. The availability of this position is subject to budgetary approval. Applications will be considered until the position is filled.

COMPUTER SCIENCE

THE UNIVERSITY OF ALBERTA. Department of Computing Science. Applications are invited for three tenure track positions at the Assistant/Associate Professor level. Candidates must have a Ph.D. in Computing Science or related field. Responsibilities include research as well as teaching of the graduate and undergraduate programs. Candidates at all areas will be considered, although preference will be given to those with expertise in the area of VLSI, Software Systems, Network and Programming Languages, Software Engineering, Artificial Intelligence and Computer Architecture. At least one appointment will be made for work in VLSI or Software Systems. Current hardware support includes an AMDAHL 5860, a network of VAX 11/780's as well equipped mini and micro computer laboratories; access to a CYBER 205 is available. Salary range is $30,316 to $48,970 and is commensurate with qualifications and experience Send Curriculum Vitae and names of three references to: Dr. Lee White, Chairman, Department of Computing Science, University of Alberta, Edmonton, Alberta, T6G 2H1. Applications will be accepted until December 31, 1985. The University is an equal opportunity employer but in accordance with Canadian immigration requirements priority will be given to Canadian citizens and permanent residents of Canada. All qualified applicants are strongly urged to apply.

SAINT MARY'S UNIVERSITY. Department of Finance and Management Science. Applications are invited for one tenure track position in the Department of Finance and Management Science beginning September 1, 1986. Applicants should have a Ph.D. (or be near completion). The successful candidate will teach graduate and undergraduate courses in one or more of the following: (1) Information systems, (2) computer science, (3) data processing. Rank and salary is the position is open and salary is competitive. In accordance with Canadian Immigration requirements, this advertisement is directed in the first instance to Canadian citizens and permanent residents of Canada. Applications should be sent to: Dr. J. Colin Dodds, Chairman, Department of Finance and Management Science, Saint Mary's University, Halifax, Nova Scotia, B3H 3C3; (902) 429-9780 Ext. 2325.

BROCK UNIVERSITY. Department of Computer Science and Information Processing. Applications are invited for a tenure-track position at the Assistant or Associate Professor level. Applicants should have a Ph.D. in Computer Science or a related field and/or equivalent industrial or commercial experience. Applicants will be expected to participate fully in the Instruction and development of the undergraduate program, they will also be expected to establish research programs in their area of interest. In accordance with Canadian immigration requirements this advertisement is directed to Canadian citizens and permanent residents. Applications, including a curriculum vitae and the names of three referees, should be sent as soon as possible to: Dr. Ivo Rival, Chairman, Dept. of Computer Science & Information Processing, Brock University, St. Catharines, Ontario, L2S 3A1.

UNIVERSITY OF WATERLOO. Computer Science. The University of Waterloo invites applications for a faculty position at the Assistant Professor level. A recent Ph.D. in Computer Science is required, with evidence of outstanding research accomplishment or potential. All areas will be considered. Salary according to experience. Applications should include a curriculum vitae and the names of three references and should be directed to Professor R.B. Simpson, Chairman, Department of Combinatorics and Optimization, University of Waterloo, Waterloo, Ontario, N2L 3G1. In accordance with Canadian immigration requirements, this advertisement is directed to Canadian citizens and permanent residents. The availability of this position is subject to budgetary approval.

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UNIVERSITY OF WATERLOO. Computer Science. The University of Waterloo invites applications for a faculty position at the Assistant Professor level. A recent Ph.D. in Computer Science is required, with evidence of outstanding research accomplishment or potential. All areas will be considered. Salary according to experience. Applications should include a curriculum vitae and the names of three references and should be directed to Professor R.B. Simpson, Chairman, Department of Combinatorics and Optimization, University of Waterloo, Waterloo, Ontario, N2L 3G1. In accordance with Canadian immigration requirements, this advertisement is directed to Canadian citizens and permanent residents. The availability of this position is subject to budgetary approval.

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CONCORDIA UNIVERSITY. Computer Science. Applications are invited for tenure track positions open at Assistant Professor level in artificial intelligence; computer architecture; operating systems; software engineering. Applicants should have a Ph.D. degree in computer science or related field with a good research record and are expected to seek external funding. The new department currently has 26 full-time professors, and others both undergraduate and graduate programs with an enrollment of over 1000 students The language of instruction is English. Send resume and names of at least 3 references to: Dr. B. Kaluzny, Chairman, Department of Computer Science, Concordia University, 1455 De Maisonneuve Blvd. West, Montreal, Quebec, H3G 1M8, Canada. In accordance with Canadian Immigration requirements, this offer is directed primarily to Canadian citizens and permanent residents of Canada.

QUEEN'S UNIVERSITY. Contract Research Position. Applications are invited from well qualified candidates for a contract appointment as a Research Associate in the area of bulk queues Candidates with sufficient computational experience and bulk queueing knowledge at the level of the book, 'A First Course in Bulk Queues' by M.L. Chaudhry and J.G.C. Templeton, Wiley Interscience, 1983 will be preferred. The appointment will last until the 31 of March 1986 with the possibility of renewal for a further 12 months. Confirmation of the renewal is subject to the availability of funds. Minimum annual salary will be $24,500 with actual salary dependent on previous experience. Interested applicants should send a curriculum vitae and transcript, along with three letters of recommendation to: Prof. M.L. Chaudhry, c/o Career Planning and Placement, Queen's University, 31 Lawrence Building, Kingston, Ontario, Canada, K7L 3N6; (613-545-7460). Applications will be accepted until October 31, 1985 or until a suitable candidate is found. In accordance with Canada Employment and Immigration regulations priority will be given to Canadian citizens and permanent residents of Canada.

McGILL UNIVERSITY. School of Computer Science. The School is expanding in the systems area and has several tenure track openings at the Assistant, Associate, and Full Professors. We have a strong research orientation and a good reputation in Canada and abroad in computer science. A Ph.D. or equivalent is required. Areas of particular interest are architecture and databases. Responsibilities include research, graduate and undergraduate teaching. Salary and starting date are negotiable. Professor T.H. Merrett, Acting Director, School of Computer Science, McGill University, 805 Sherbrooke Street West, Montreal, Quebec, H3A 2K6, Canada in accordance with Canadian Immigration regulations, this advertisement is directed to Canadian citizens and permanent residents of Canada, in the first instance.

DENTISTRY

THE UNIVERSITY OF WESTERN ONTARIO. Dentistry. A probationary (tenure-track) appointment of the rank of Assistant Professor will be available in the Division of Paediatric Dentistry, Faculty of Dentistry, commencing July 1, 1986. Candidate should possess the Doctor of Dental Surgery (or equivalent) degree and should hold (or be eligible for) a fellowship Responsibilities include teaching and research, and the candidate should have an interest in working with the handicapped child. To apply, and applications, which should include a curriculum vitae, should be addressed to Dean, Faculty of Dentistry, The University of Western Ontario, London, Ontario, Canada, N6A 5C1. In accordance with Canadian Immigration requirements, this advertisement is directed to Canadian citizens and permanent residents. An equal opportunity employer.

THE UNIVERSITY OF WESTERN ONTARIO. Dentistry. A limited-term appointment at the rank of Assistant Professor will be available in the Division of Paediatric Dentistry, Faculty of Dentistry, commencing approx. April 1986. Initial appointment for one year, with possibility of renewal. Applicants must possess the Doctor of Dental Surgery degree or equivalent. Successful candidate will be responsible for development of a program of dental care in an institution for handicapped adults. There will be some teaching in the Faculty of Dentistry. An interest in research is desirable. Inquiries and applications, which should include a curriculum vitae, should be addressed to: Dean, Faculty of Dentistry, The University of Western Ontario, London, Ontario, Canada, N6A 5C1. In accordance with Canadian Immigration requirements, this advertisement is directed to Canadian citizens and permanent residents. An equal opportunity employer.

UNIVERSITY OF SASKATCHEWAN. Pediatric Dentistry. A position exists in the College of Dentistry, University of Saskatchewan, for a full-time faculty member in the Department of Community and Pediatric Dentistry The candidate should have completed an accreditated training program in pediatric dentistry and be eligible for specialty certification with the College of Dental Surgeons of Saskatchewan. Responsibilities include undergraduate teaching in all aspects of children's dentistry. Research actively and scholarly work in related areas is expected. Professional consulting and practice privileges to a maximum of two half days per week are permitted. The appointment, effective January 1, 1986, will be probationary and at the level of Assistant Professor. Interested applicants should send curriculum vitae and related documentation and the names for reference purposes to: Dr. R.E McDermott, Chairman, Department of Community and Pediatric Dentistry, College of Dentistry, University of Saskatchewan, Saskatoon, Saskatchewan, Canada, S7N 0W0. In accordance with Canadian Immigration requirements, priority will be given to Canadian citizens and permanent residents.

THE UNIVERSITY OF WESTERN ONTARIO. Department of Pathology. The Department of Pathology of the University of Western Ontario is seeking an oral pathologist for the Division of Oral Pathology. This is a full-time position at the Assistant Professor level. Initial appointment 2-3 years probationary, tenure track. Dr. D.S. Allan qualifications in oral pathology required. Activities of the division include undergraduate and graduate teaching, research and surgical oral pathology. The division has a fully accredited training program in oral pathology. Enquiries or applications, which should include a curriculum vitae and the names of three referees, should be sent to: Dr. A.C. Wallace, Acting Chairman, Department of Pathology, The University of Western Ontario, London, Ontario, N6A 5C1. Closing date for applications - November 30, 1985. In accordance with Canadian immigration requirements, this advertisement is directed to Canadian citizens and permanent residents. An equal opportunity employer.

EARTH SCIENCES

UNIVERSITY OF WATERLOO. Earth Sciences. Applications are being accepted for the position of Stratigrapher. The successful applicant will hold a recent Ph.D. in Geology and be an active researcher in one or more of the following fields: sedimentary basin analysis, diagenesis of sedimentary rocks, structural geology or biostratigraphy. Teaching at the undergraduate level will involve 3 courses per year. Requirements, graduate teaching will be in the area of interest to the applicant. This will be a two-year term appointment which could become tenure track. Appointment will be made as soon as possible in late 1985 or early 1986. Salary will depend on qualifications and experience. Please send curriculum vitae and names of three referees, to: Dr. S.M. Peirce, Chairman, Department of Earth Sciences, University of Waterloo, Waterloo, Ontario, N2L 3G1

UNIVERSITY OF WATERLOO. Earth Sciences (Geological Engineering Programme). Applications for a junior faculty position starting 1 May 1986 or later are invited from those with teaching and research interests in geomechanics. Candidates must be certified as Professional Engineers or have a Ph.D. degree, be capable of teaching basic geology and advanced geomechanics courses, and be prepared to develop an active research program involving graduate students with industrial participation. Salary will depend on qualifications, and experience. A more detailed job description may be obtained on request at the address below or by phoning 519-885-1211 (x364). Please send a complete resume, including the names of publications and a letter of intent to: Prof. M.B Dusseault, Chairman, Search Committee, Dept. of Earth Sciences, University of Waterloo, Waterloo, Ontario, Canada, N2L 3G1. In accordance with Canadian immigration requirements, this advertisement is directed to Canadian citizens and permanent residents. It is the intention of the University of Waterloo to fill its vacancies with recent Ph.D. graduates appointed as Assistant Professors wherever possible

ECONOMICS

UNIVERSITY OF VICTORIA. Department of Economics. Applications are invited to fill a regular full-time (tenure-track) Assistant Professor position effective July 1, 1986. Candidates should hold, or have attained, a recent Ph.D. in Economics with specialization in Econometrics. Canadian immigration regulations now require the University to consider applications from Canadian citizens and permanent residents of Canada before proceeding with applications from other persons. Please send applications, including curriculum vitae and the names of three referees, to: Dr. J. Scheafsma, Chairman, Search Committee, Department of Economics, University of Victoria, P.O. Box 1700, Victoria, B.C., V8W 2Y2, Canada. Closing date for applications is November 30, 1985. The University of Victoria offers equal employment opportunities to qualified male and female applicants.

WILFRID LAURIER UNIVERSITY. Department of Economics. Rank and salary open and commensurate with qualifications. Ph.D. or near Ph.D. preferably with some teaching experience and publications. Duties include teaching at the undergraduate level and research. Macroeconomics preferred but others considered Positions offered subject to budget approval In accordance with Canadian immigration requirements, this advertisement is directed to Canadien citizens and permanent residents. Applications with curriculum vitae and names of three referees should be sent to Dr. John Finlay, Department of Economics, Wilfrid Laurier University, Waterloo, Ontario, N2L 3C5.

UNIVERSITY OF ALBERTA. Economics. The University of Alberta, Department of Economics, has an opening for a tenure-track appointment, commencing July 1, 1986. Rank is assistant or an associate professor. 1985 annual salary floor is $30,316 for assistant and $38,170 for associate professors. Ph.D. and previous teaching experience are required. A strong research record in microeconomic theory with concentration in information economics, decision theory and/or mathematical economics is sought. The University of Alberta is an equal opportunity employer, but, in accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada. Send applications (including complete curriculum vitae and names of three references) to Dr. Brian L. Scarle, Chairman, Department of Economics, University of Alberta, Edmonton, Alberta, T6G 2H4, by December 31st, 1985.

YORK UNIVERSITY. Economics. The Department of Economics has openings for tenure track positions and sessional appointments, subject to authorization and budget approval Rank and salary are commensurate with qualifications and experience At the Assistant Professor level candidates should have a Ph.D. Degree or be expected to be awarded it. At the Associate Professor level have demonstrated achievement as established scholars and good teachers. Duties include teaching (at undergraduate and graduate levels) and research. Fields of specialization open. Applications, with c.v. and names of three referees, should be sent to Professor John C. Evans, Chairman, Department of Economics, Faculty of Arts, York University, North York, Ontario, M3J 1P3. Closing date for applications is December 31, 1985. In accordance with Canadian Immigration requirements, this advertisement is directed to Canadian citizens and permanent residents.

EDUCATION

UNIVERSITY OF SASKATCHEWAN. College of Education. The College of Education invites applications for a tenure-track position in Language Arts Education in the Department of Curriculum Studies Qualifications: Evidence of work on doctorate in progress, and successful teaching at the alementary and middle-year levels. Responsibilities: 1) to teach undergraduate and graduate courses in elementary language arts, children's literature, educational drama, and related courses; 2) to supervise student teaching and internship; 3) to advise graduate students in English Language Arts; 4) to participate actively in in-service work; 5) to conduct research Rank And Salary: Assistant Professor. Commensurate with experience and qualifications. Employment Date: July 1, 1986. Deadline: February 15, 1986. Apply To: Dr. S.O. Robinson, Head, Department of Curriculum Studies, College of Education, University of Saskatchewan, Saskatoon, Saskatchewan, S7N 0W0, Canada Please Note: This position is subject to budget approval. The University of Saskatchewan is an equal opportunity employer. However, in accordance with the Canadian Immigration requirements, this ad is directed primarily to Canadian citizens and permanent residents.

UNIVERSITY OF SASKATCHEWAN. College of Education. The College of Education invites applications for a tenure track position in Reading Education in the Department of Curriculum Studies. Qualifications: Qualifications: Successful teaching in the Elementary/Junior or Senior High School. Experience at the secondary level and with adult learners would be helpful. Responsibilities: 1) Teach undergraduate and graduate courses in Reading, supervise interns and student teachers, and teach related courses; 2) Advise graduate students in Reading; 3) Participate actively in in-service work; 4) Encourage and conduct research; 5) Provide University Assistant Professor. Commensurate with experience and qualifications. Employment Date: July 1, 1986. Deadline: February 15, 1986. Apply To: Dr. Sam Robinson, Head, Department of Curriculum Studies, College of Education, University of Saskatchewan, Saskatoon, Saskatchewan, S7N 0W0, Canada.

ENGINEERING

UNIVERSITY OF WATERLOO. Department of Menegement Sciencee. Faculty of Engineering. The Department of Management Sciences in the Faculty of Engineering is seeking an individual for a tenure track position with research and teaching interests in management of manufacturing systems. In addition the ability to teach management information systems, engineering economy or technology management would be desirable. The appointment may be at the Assistant or Associate Professor rank. Candidates should send e cur riculum vitae and three references to professor M.J. Magazine, Chairman, Department of Management Sciences, University of Waterloo, Waterloo, Ontario, N2L 3G

cessing, robotics or communication theory. The Department has a full-time faculty of 15 members, an undergraduate enrollment of 350, and a B.Sc.E. program with options in electronics, communications and fields, power apparatus and systems, control and computer engineering. In addition, there are 30 graduate students working in the above areas. In accordance with Canadian immigration requirements, this advertisement is directed to Canadian citizens and permanent residents. Resume and the names of three referees should be sent to: Dean of Engineering, University of New Brunswick, P.O. Box 4400, Fredericton, N.B., Canada, E3B 5A3.

UNIVERSITY OF WATERLOO. Systems Design Engineering. Applications are being accepted for the position of Assistant Professor (tenure-track). Candidates should have a recent Ph.D. in the general area of physical systems theory - with particular research interests in dynamical systems and control, systems modelling and simulation, or in related areas. A strong background in experimental methods (or general laboratory experience), or hardware design will be an asset. The successful candidate will be expected to teach both undergraduate and graduate courses, supervise graduate students and maintain an active research program. Salary will be at Assistant Professor level. Application with complete curriculum vitae and the names of three referees should be sent to Professor K. Huseyin, Chairman, Department of Systems Design Engineering, University of Waterloo, Waterloo, Ontario, N2L 3G1. It is hoped that the appointment will be filled by December 1985, but the position will remain open until filled. In accordance with Canadian Immigration regulations, this advertisement is directed to Canadian citizens and permanent residents

UNIVERSITY OF WATERLOO. Electrical Engineering. The Electrical Engineering Department has active graduate programmes in many areas and has been the recipient of NSERC strategic grants or major equipment grants in the areas of Computer Communication Networks, VLSI, Robotics, High Voltage. New silicon device fabrication facilities for research are planned. The Electrical Engineering Department is seeking candidates for appointment to tenure-track faculty positions. The candidates with university or industrial research experience in one of the following fields will be preferred: computer-aided design, semiconductor devices, computer engineering, computer/VLSI architecture, control or high voltage engineering. The candidate should have a doctoral degree and a commitment to research and teaching at the undergraduate and graduate level. Salary and rank will be commensurate with experience. The University of Waterloo has a policy of preferring recent Ph.D.'s for appointment to tenure track faculty positions, normally to a rank of Assistant or Associate Professor. In accordance with Canadian Immigration requirements, this advertisement is directed to Canadian citizens and permanent residents. Residents of Canada should be directed to Dr. J.W. Mark, Chairman, Department of Electrical Engineering, University of Waterloo, Waterloo, Ontario, N2L 3G1. Telephone: (519) 888-4015.

THE UNIVERSITY OF ALBERTA. Department of Mechanical Engineering. The Department of Mechanical Engineering at the University of Alberta is taking applications for a teaching position at the Assistant Professor level (ultimate range $30,316 - $43,780) in the general area of the Design of Mechanical Systems with emphasis in the area of CAD/CAM and/or Robotics. The successful applicants should have at least one of his/her degrees in Mechanical Engineering and be willing to participate in the teaching of basic core courses in Mechanical Engineering including laboratories and design seminars. The successful applicant will be required to develop a viable research program including having the ability to attract and supervise graduate students within the framework of the facilities and broad interest existing in the Department. Please submit Curriculum Vitae, description of research goals and interests, and the names, addresses and telephone numbers of three referees to M.G. Faulkner, Chairman, Department of Mechanical Engineering, Mechanical Engineering Building, University of Alberta, Edmonton, Alberta, T6G 2G8, Canada. The University of Alberta is an equal opportunity employer, but in accordance with Canadian immigration requirements, this advertisement is directed to Canadian citizens and permanent residents. Deadline for submitting applications is December 31, 1985

UNIVERSITY OF NEW BRUNSWICK. Marine Engineering. Applications are invited for a tenure-track position in Marine Engineering in the Division of Mathematics, Engineering and Computer Science of the University of New Brunswick, Saint John Campus. Appointment is effective when position is filled, and is subject to final budgetary approval. Candidates should have a Ph.D. in Marine Engineering and some industrial experience, and be eligible for registration as professional engineers. Duties will include coordination of short courses and seminars to personnel involved in the Canadien Government's Canadian Patrol Frigate Program and related marine engineering work; liaison with the New Brunswick students registered in the last two years of the Memorial University Naval Architecture and Marine Engineering Program and coordination of the selection of students to take part in this transfer in future years; offering a required course in marine engineering for University of New Brunswick students transferring to the fifth term of the Bachelor's program at Memorial University; monitoring the long-term need for a full degree program in marine engineering at the University of New Brunswick. Rank and remuneration will be commensurate with qualifications and experience. Applications including curriculum vitae and names of three referees should be sent to: Dr. P. McGahan, Dean of Faculty, University of New Brunswick, Saint John Campus, P.O. Box 5050, Saint John, N.B. E2L 4L5. In accordance with Canadian immigration requirements this advertisement is directed first to Canadian citizens and permanent residents, although all qualified individuals are encouraged to apply.

THE UNIVERSITY OF BRITISH COLUMBIA. Engineering. The Department of Electrical Engineering of The University of British Columbia invites applications for a tenure-track position at the Assistant Professor level in the following areas: Microelectronics/VLSI Design. Qualifications include a Ph.D. and published evidence of excellent research ability. Industrial experience would also be an asset. Successful candidates should be prepared to develop a vigorous research program and to teach in the undergraduate and graduate programs and supervise graduate students. Appointments will be effective May 1, 1986 or earlier if suitable applicants are forthcoming; a later starting date may be considered. Salary will be commensurate with qualifications (Floor - $30,000 plus). Application deadline will be January 1, 1986, or until a suitable candidate is selected. In accordance with Canadian immigration requirements, this is directed to Canadian citizens and permanent residents. The position will be filled subject to final budgetary approval. Please address all correspondence to: Head, Department of Electrical Engineering, The University of British Columbia, Vancouver, British Columbia, V6T 1W5.

THE UNIVERSITY OF BRITISH COLUMBIA. Engineering. The Department of Electrical Engineering of The University of British Columbia invites applications for two tenure-track positions at the Assistant Professor level in the following areas: Digital Systems/Computer Engineering. Qualifications include a Ph.D. and published evidence of excellent research ability. Industrial experience would also be an asset. Successful candidates should be prepared to develop a vigorous research program and to teach in the undergraduate and graduate programs and supervise graduate students. Appointments will be effective May 1, 1986 or earlier if suitable applicants are forthcoming; a later starting date may be considered. Salary will be commensurate with qualifications (Floor - $30,000 plus). Application deadline will be January 1, 1986, or until suitable candidates are selected. In accordance with Canadian immigration requirements, this is directed to Canadian citizens and permanent residents. Positions will be filled subject to final budgetary approval. Please address all correspondence to Head, Department of Electrical Engineering, The University of British Columbia, Vancouver, British Columbia, V6T 1W5.

McGILL UNIVERSITY. Chemical Engineering. Research Associate; Polymer rheology and plastics processing. Qualifications required include a doctorate in chemical engineering and experience in the rheology and processing of molten plastics and the numerical solution of partial differential equations. Some knowledge of computer graphics is highly desirable. The duties include the development of on-line, interactive system for the analysis and interpretation of experimental data on the nonlinear viscoelasticity of molten polymers. The overall goal of the research is to correlate the nonlinear properties of molten thermoplastics with their process performance. The annual salary is $20,000. Applicants should send a curriculum vitae and a transcript to Prof. J. M. Dealy, Dept. of Chem. Eng., McGill University, 3480 University St., Montreal, Quebec, H3A 2A7. The position will be available April 1, 1986, and the duration of the appointment will be three years. The closing date for applications is November 30, 1985. In accordance with Canadian Immigration requirements, this advertisement is directed to Canadian citizens and permanent residents of Canada.

TECNNICAL UNIVERSITY OF NOVA SCOTIA. Food Engineering. Department of Agricultural Engineering at Technical University of Nova Scotia has vacant position for Assistant or Associate Professor with qualifications or expertise in area of Food Engineering. Duties include developing and teaching undergraduate and graduate courses, and conducting research in area of Food Engineering. Applicant should have Ph.D. or equivalent degree with at least one degree or extensive experience in the specialty of Food Engineering within Agricultural Engineering. Candidate should be eligible for membership in Association of Professional Engineering of Nova Scotia. Salary commensurate with qualifications and experience. Excellent opportunities for advancement. Starting date is July 1, 1986. In accordance with Canadian immigration requirements this advertisement is directed to Canadian citizens or permanent residents of Canada. Send curriculum vitae and names of references to: Dr. K.C. Watts, Head, Department of Agricultural Engineering, Technical University of Nova Scotia, P.O. Box 1000, Halifax, Nova Scotia, Canada, B3J 2X4, Tel. (902) 429-8300 ext. 133.

CONCORDIA UNIVERSITY. Electrical Engineering. Concordia University in Montreal invites applications for one tenure-track position in Electrical Engineering. The areas of interest are VLSI and Computer Engineering. Applicants in related fields will be considered as well. The level of the position, Assistant, Associate or Full Professor, depends upon the background and experience of the applicant. The department has a strong research program involving all of the staff members. In addition to research, staff members teach courses at the undergraduate and the graduate level. The teaching load is equivalent to those at other research universities in North America. Although the Province of Quebec is French speaking, Concordia is an English-speaking institution; consequently classes are in English. Applicants should send a resume and a list of three references to Professor J.F. Hayes, Chairman, Electrical Engineering Department, Concordia University, 1455 de Maisonneuve W., Room 915-7, Montreal, Quebec, H3G 1M8. In accordance with Canadian immigration requirements this offer is directed primarily to Candian citizens and permanent residents of Canada.

UNIVERSITY OF VICTORIA. Electrical Engineering. Applications are invited for a tenure-track position in the Department of Electrical Engineering at the University of Victoria. We invite undergraduate and graduate teaching, graduate supervision at the master's and doctoral levels, and research in one or more of the following areas: digital electronic circuits, digital hardware, microprocessor applications, computer architecture, and computer systems. The rank is open and the salary will be commensurate with qualifications and experience. Applicants should hold a doctoral degree as well as graduate students have been admitted and eight faculty members have already been hired. Further, an extensive range of equipment has been acquired or ordered including Data General computers MV4000 and MV10000, a Matheus VLSI workstation, and several Sun workstations. In accordance with Canadian immigration regulations, this advertisement is directed to Canadian citizens and permanent resident of Canada. If no suitable candidate is found, the search may be extended to other candidates. Applications should include curriculum vitae and the names of at least four referees, should be addressed to: Dr. A. Antoniou, Dept. of Electrical Engineering, University of Victoria, P.O. Box 1700, Victoria, B.C., Canada, V8W 2Y2.

McGILL UNIVERSITY. Department of Mechanical Engineering. Bioengineering. An opening exists for a Research Engineer in the Bioengineering Research Group of the Dept. of Mechanical Engineering. Applicants should have at least an M.Eng. degree and experience in the area of orthopaedic biomechanics, especially in the mechanical analysis of biological tissues. Experience in in-vitro experimental techniques related to the human musculoskeletal structure would be an asset. The position is available as of September 1986, and is renewable on a yearly basis subject to budgetary approval. Applications and curriculum vitae should be addressed to Mrs. S. Swain, Bioengineering Laboratory, Dept. of Mechanical Engineering, McGill University, 817 Sherbrooke St. W., Montreal, Quebec, H3A 2K6. In accordance with Canadian Immigration requirements, this offer is directed to Canadian citizens and permanent residents.

UNIVERSITÉ DE SHERBROOKE. Département de génie chimique. Faculté de sciences appliquées. Professeur en modélisation mathématique et contrôle des procédés industriels et biologiques demandé pour le 1er janvier 1986. Fonctions: enseignement aux 1er, 2et et 3e cycles; direction d'étudiants dans un programme actif de recherche et de développement dans les domaines de sa spécialité. Exigences: doctorat (Ph.D.) avec formation en génie chimique ou équivalente; expérience souhaitable dans les domaines de la modélisation, des méthodes numériques, du contrôle et de la simulation. Connaissance du français parlé et écrit. Faire parvenir le plus tôt possible: curriculum vitae avec trois noms pouvant fournir des recommandations (date limite: 30 novembre 1985) au Directeur du Département de génie chimique, Faculté des sciences appliquées, Université de Sherbrooke, Sherbrooke (Québec) Canada, J1K 2R1. Téléphone: 819/821-7168 ou 821-7171 N.B. conformément aux exigences prescrites par l'immigration au Canada, la priorité sera accordée aux citoyens canadiens et aux résidents permanents. Poste offert également aux hommes et aux femmes.

ENGLISH

UNIVERSITY OF TORONTO. Dictionary of Old English. The Dictionary of Old English invites applications for two editors. These appointments are subject to budgetary approval. Applicants will be considered as Research Associates (an academic rank) for a term of three years, renewable as funding continues. The positions involve full time work on writing entries for the Dictionary of Old English. Candidates should have a Ph.D. or equivalent thesis degree in Old English language and literature with a concentration in Old English philology. A wide-ranging knowledge of the Old English corpus is required, and a solid background in Latin and the cognate Germanic languages is essential. Interest in linguistics, and in the use of the computer for lexicographical work would be assets. Candidates should have a record of high accomplishment and productivity and a demonstrated ability to work with others on a team project; they should take pleasure in detailed, meticulous work. The University offers an excellent benefits package, including generous holidays throughout the year, and a month of paid vacation. The starting salary will be of the 1986-87 floor for an assistant professor, $27,000 Canadian, or above, depending on experience. The sterting date is July 1, 1986. Applications, accompanied by a full curriculum vitae and three letters of reference should be sent by December 1, 1985 to: The Editors, Dictionary of Old English, Room 14285, Roberts Research Library, University of Toronto, Toronto, Ontario, M5S 1A1. In accordance with Canadian immigration requirements, this advertisement is directed to Canadian citizens and permanent residents of Canada.

UNIVERSITY OF OTTAWA. Department of English. Applications are being accepted for a tenure-track position at the Associate rank, effective, if possible, July 1, 1986. Specialties required are in Nineteenth-Century American and Critical Theory. Secondary consideration will be given to specialists in Modern Poetry and Romanticism or Victorians. Candidates should have a Ph.D. and possess a strong record of scholarly research. In accordance with Canadian immigration requirements, this advertisement is directed in the first instance to Canadian citizens and permanent residents of Canada. A limited number of Ottawa offers equal employment opportunities to qualified male and female applicants. Deadline for applications is November 15, 1985. Please send resume, c.v. and letters of reference from three referees to: Dr. Frank M. Tierney, Chairman, Department of English, Faculty of Arts, University of Ottawa, Ottawa, Ontario, K1N 6N5.

UNIVERSITY OF SASKATCHEWAN. Department of English. Applications are invited for a tenure-track position, at the rank of Assistant Professor, in American Literature (with emphasis on Black Literature, in Southern Literature). The Ph.D. is essential; teaching experience and publications are desirable. The appointment will commence on 1 July 1986. The deadline for the receipt of applications is 5 November 1985. Applicants should send a Curriculum Vitae, transcripts, and the names of three referees to Professor D.C. Kerr, Acting Chairman, Department of English, University of Saskatchewan, Saskatoon, Saskatchewan, S7N 0W0 In accordance with Canadian immigration requirements, this advertisement is directed to Canadian citizens and permanent residents,

UNIVERSITY OF VICTORIA. English. Subject to budgetary approval, the Department of English intends to appoint two Assistant Professors to tenure-track positions, effective 1 July 1986. Applications are invited from candidates in all fields. The salary will depend on qualifications and experience. Candidates should send c.v. and the names of three referees to Dr. Thomas R. Cleary, Chairman, Department of English, University of Victoria, P.O. Box 1700, Victoria, B.C., V8W 2Y2; the deadline for applications is 15 December 1985. Canadian immigration regulations now require the University to assess applications from Canadian citizens and permanent residents before considering applications from other persons. The University of Victoria offers equal employment opportunities to qualified male and female applicants.

UNIVERSITY OF WATERLOO. English. Rhetoric and Professional Writing. Applications are invited for a tenure-track position at the assistant or associate professor level. Applicants must have a Ph.D. with specialization in rhetoric, stylistics, and professional and technical writing. Background in communication theory and critical theory is also desirable. Duties include teaching writing, sound research and publication, and administrative ability is essential. In the first year of the appointment, duties will include teaching undergraduate courses in writing and rhetoric and helping with the development of a graduate program. Salary negotiable. Appointment effective July 1, 1986. Closing date for applications is December 1, 1985. Send resumes to Dr. Gordon E. Slethaug, Chairman, Department of English, University of Waterloo, Waterloo, Ontario, N2L 3G1. The availability of this position is subject to budgetary approval. In accordance with Canadian immigration requirements, this advertisement is directed in the first instance to Canadian citizens and permanent residents. It is the intention of the University of Waterloo to fill its vacancies with recent Ph.D. graduates appointed as Assistant Professors wherever possible.

DALHOUSIE UNIVERSITY. Department of English. The Department of English at Dalhousie University invites applications for three appointments beginning July 1, 1986. The positions will be full time, tenure stream or tenured appointments at the rank of Assistant or Associate Professor. While the Department recognizes that it has special needs, it invites applications in all fields in accordance with Canadien Immigration requirements, this advertisement is directed to Canadian citizens and permanent residents. With respect to the employment of women the Dalhousie University is an affirmative action employer. Application should be made to: Professor Rowland Smith, Chairman, Department of English, Dalhousie University, Halifax, Nova Scotia, Canada, B3H 3J5. Closing date for applications is December 31, 1985.

WILFRID LAURIER UNIVERSITY. English. Applications are invited for two open positions in the Department of English effective July 1, 1986 for the 1986-87 academic year. One position requires a specialist in sixteenth-century English literature, mainly non-dramatic. The second position requires a specialist in Old and Middle English language and literature with particular interest in the history of the language. Ph.D. required in each case. Rank and salary commensurate with qualifications and experience. Deadline for application is January 31, 1986. Applications with Curriculum Vitae, including the names of at least three referees, should be sent to Dr James Doyle, Chairman, Department of English, Wilfrid Laurier University, 75 University Avenue West, Waterloo, Ontario, N2L 3C5. In accordance with Canadian immigration requirements, this advertisement is directed to Canadian citizens and permanent residents.

FINANCE/MANAGEMENT

SAINT MARY'S UNIVERSITY. Department of Finance and Management Science. Applications are invited for a tenure track faculty position in the Department of Finance and Management Science beginning September 1, 1986. Applicants should have a Ph.D. (or be near completion). The successful candidate will teach graduate and undergraduate finance courses. The rank of the position is open and the salary is competitive. In accordance with Canadian immigration requirements, this advertisement is directed to Canadian citizens and permanent residents of Canada. Applications should be sent to: Dr. J. Colin Dodds, Chairman, Department of Finance and Management Science, Saint Mary's University, Halifax, Nova Scotia, B3H 3C3; (902) 429-9780 Ext. 2325.

GENETICS

THE UNIVERSITY OF BRITISH COLUMBIA. GRACE HOSPITAL. Genetics. A new Genetic Associate position is available in Medical Genetics, U.B.C., to commence immediately. Formal Genetic Associate training preferred (i.e. M.S. degree), practical experience desired. Send C.V. and 3 references to Dr. J.G. Hall, Medical Genetics, Grace Hospital, 4490 Oak St., Vanc., B.C., V6H 3V5. U.B.C. is an opportunity employer. Preference will be given to Canadian Citizens or Landed Immigrants.

UNIVERSITY OF ALBERTA. Department of Genetics. A vacancy is available for a Molecular Geneticist, at the Assistant Professor level. The tenure-track appointee will have teaching duties primarily within an undergraduate program in Cell Biotechnology. Candidates should have a Ph.D and post-doctoral research experience in Molecular Genetics; establishment of an independent research program will be an integral part of the appointee's duties. Candidates with a well-rounded understanding of modern techniques of in vivo and in vitro genetic manipulation, and their applications, will receive high consideration. Genetics research has been faculty housed in a modern research facility in the Faculty of Science; research emphasis is in molecular biological. The Biotechnology program, offered jointly with Microbiology, stresses genetics, microbiology, chemistry and biochemistry. The University of Alberta, Alberta's senior university, has 25,000 students. Heavy emphasis on biosciences is found in the Faculties of Science, Medicine and Agriculture. The appointment will commence July 1, 1986. Salary will be in the range $30,315 - $43,780, commensurate with qualifications. An appropriately qualified appointee may be eligible for substantial research establishment funding from the Alberta Heritage Foundation for Medical Research. Applicants should send a curriculum vitae, reprints of research publications and the names and addresses of at least three referees to: Dr. David Nash, Chairman, Department of Genetics, University of Alberta, Edmonton, Alberta, T6G 2H7, Canada. The closing date for applications is December 31st, 1985. The University of Alberta is an equal opportunity employer but, in accordance with Canadian Immigration requirements, this advertisement is directed to Canadian citizens and permanent residents.

GEOGRAPHY

UNIVERSITY OF MANITOBA. Geography. Applications are invited for a probationary (tenure track) position. The appointment is effective January 1, 1986, or earlier, and will be at the Assistant Professor rank Minimum salary will be $27,101 subject to adjustment under current collective bargaining with the Faculty Association. Ph.D. required. Teaching experience preferred. Desired specialization is in geographic information processing with emphasis in G.I.S. and cartography. Primary responsibility will be to develop and teach undergraduate and graduate programs in G.I.S. Submit a letter of application, curriculum vitae, and the names of three referees to: Dr. William Norton, Head, Department of Geography, University of Manitoba, Winnipeg, Manitoba, R3T 2N2, Canada. Closing date is November 30, 1985. Both women and men are encouraged to apply in accordance with Canadian immigration requirements this advertisement is directed to Canadian citizens and permanent residents.

GEOLOGY

UNIVERSITY OF OTTAWA. Geology. Applications are invited for a tenure-track position at the Assistent or Associate Professor level, starting July 1, 1986. The successful applicant will teach at all undergraduate and graduate levels and participate in research programmes in fields such as Precambrian Geology and Basin Analysis within the Ottawa-Carleton Centre for Geoscience Studies. The Centre is a cooperative venture combining research efforts of geoscientists from the University of Ottawa and Carleton University; scientists from the Geological Survey of Canada are also active participants. Ability to teach in both French and English is a requirement. In accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents. Send application and resume, including the names and addresses of 3 referees, to Dr. W.K. Fyson, Chairman, Department of Geology, University of Ottawa, Ottawa, Ontario, K1N 6N5.

QUEEN'S UNIVERSITY. Department of Geological Sciences. Geophysicist. The Department of Geological Sciences at Queen's University invites applications for a tenure-track position in geophysics starting in July 1986. Candidates should have a Ph.D. in either pure or applied geophysics; however, those with research interests in electrical techniques and/or applied geophysics will be given preference. Candidates will be expected to teach both undergraduate-level and graduate-level courses in their area of expertise and to develop active research programmes. An appointment at the assistant professor level is envisaged but qualified applicants at all levels will be considered. In accordance with requirements of the Department of Employment and Immigration, priority will be given to Canadian nationals or landed immigrants to Canada. Candidates of either sex are equally encouraged to apply. Applicants should include a resume and the names of at least three referees; Professor Edward Farrar, Chairman, Department of Geological Sciences, Queen's University, Kingston, Ontario, Canada, K7L 3N6

HISTORY

THE UNIVERSITY OF NEW BRUNSWICK. History. The Department of History of the University of New Brunswick invites applications for a tenured or tenure-track position in modern Military History, rank open. The candidate should have a completed Ph.D. at time of application. Duties will include the direction of an established graduate programme in Military History and the teaching of undergraduate courses emphasizing contemporary military topics, as well as a broad introductory survey. Applicants should send a C.V. and three letters of reference to Dr. Peter Neni, Chairman, Dept. of History, P.O. Box 4400, University of New Brunswick, Fredericton, N.B., E3B 5A3. The appointment will be effective from July 1, 1986. Applications and the three letters of reference must be received by November 1, 1985. In accordance with Canadian Immigration requirements, priority must be given to Canadian citizens and permanent residents of Canada

SAINT MARY'S UNIVERSITY. History. Saint Mary's University invites applications for a full-time tenure track position in East Asian History The successful candidate will hold a doctoral degree and have teaching experience and substantial publications that demonstrate a general interest in China and/or Japan and be prepared to assume an administrative role in an established Interdisciplinary East Asian Studies program. Rank and salary are commensurate with qualifications. The appointment will commence on 1 September 1986. Applications with complete curriculum vitae and three letters of reference should be directed to: Dr. G.F.W Young, Chairman, Department of History, Saint Mary's University, Halifax, Nova Scotia, B3H 3C3. Closing date for receipt of applications is December 15, 1985.

HUMANITIES

YORK UNIVERSITY. Faculty of Arts. The Division of Humanities, Faculty of Arts, York University, invites applications for a tenure-track appointment in the area of the visual arts and their relation to culture, to commence on July 1, 1986. This appointment is subject to budgetary approval. Candidates should have the appropriate scholarly strengths to teach an upper-level course in the visual arts and Canadian culture, and an interest in the Western Cultural tradition, in interdisciplinary courses from the first to fourth years. A Ph.D. (or the equivalent) is required. The rank will depend on qualifications and experience. Letters with the names of three referees should be sent by January 17, 1986 to: Professor William Whitla, Chair, Division of Humanities, York University, 4700 Keele Street, Downsview, Ontario, M3J 1P3. In accordance with Canadian immigration requirements, this advertisement is directed to Canadian citizens and permanent residents.

INTERDISCIPLINARY

DALHOUSIE UNIVERSITY. Transition Year Programme. Applicaitons are invited for a three quarter time Instructor position to tutor one or more of the subjects in the Transition Year Programme curriculum, carry out academic advising and act as Assistant Director to assist with admissions, recruitment, community and public relations. The initial appointment will be for three years commencing July 1, 1986 Qualifications are at least an M.A. or M.Sc. in an appropriate field (English, Mathematics, Social Sciences, Social Work, Education) or B.A. in one of these fields and another degree in Social Work or Education. Deadline for receipt of applicaiton is December 8, 1985. Please send resume and the names of three referees to: Carolyn Waterson, Director, Transition Year Programme, 1459 LeMarchant St., Halifax, N.S., B3H 3J5. In accordance with Canadian Immigration requirements, this ad is directed to Canadian citizens or permanent residents of Canada Dalhousie has a policy of affirmative action with respect to the employment of women.

LAW

UNIVERSITY OF WINDSOR. Law. 1. Assistent, associate or full professor subject to budget approval by the University; 2. Graduate work, practice or equivalent experience beyond first degree; 3. Teaching and research in basic public and common law subjects; 4. Salary commensurate with qualifications and experience; 5. Apply: Neil Gold, Dean, Faculty of Law, University of Windsor, Windsor, Ontario, N9B 3P4. 6. Effective: July 1, 1986. In accordance with Canadian immigration requirements, this advertisement is directed to Canadian citizens and permanent residents. The Faculty has an innovative program of studies and pursues scholarly interests in Access to Justice, Canada/U.S. Trade and Community legal education. The Fecutly sponsors the following com-

munity projects: Community Law Program, Legal Assistance of Windsor and Prepaid Legal Services Program of Canada. The Faculty publishes the Windsor Yearbook of Access to Justice and the Canadian Community Law Journal and is home to the Canadian Journal of Women and the Law.

YORK UNIVERSITY. Law. Osgoode Hall Law School of York University invites applications for appointment to the Faculty as Director of its Intensive Programme in Poverty Law. This is a tenure-stream appointment, commencing July 1, 1986. The incumbent should have a sound understanding of poverty law theory and practice, clinical education experience, a demonstrated interest in scholarly research and writing, and a graduate law degree or equivalent experience. Please forward a curriculum vitae before October 31, 1985 to: Professor James C. Hellhaway, Director of Clinical Education, Osgoode Hall Law School, York University, 4700 Keele Street, North York, Ontario, M3J 2R5. In accordance with Canadian immigration requirements, this advertisement is directed to Canadian citizens and permanent residents.

COMMITTEE OF ONTARIO LAW DEANS. Applications are invited from women and women with outstanding academic or professional credentials, for assistant, associate, and full professor positions in Ontario law schools. Please write to the Committee of Ontario Law Deans, Box 913, Canada Law Book, 240 Edward Street, Aurora, Ontario L4G 3S9 giving full details of your academic and professional record, teaching and research experience; areas in which you may be specifically interested or qualified; names of three referees. Replies will be circulated to all Ontario law faculties. In accordance with Canadian Immigretion requirements, this advertisement is directed to Canadian citizens and permanent residents.

MATHEMATICS

McMASTER UNIVERSITY. Department of Mathematics & Statistics. The Department of Mathematics & Statistics, McMaster University, invites applications for a tenure track Assistant Professorship starting July 1, 1986. Candidates should have a Ph.D., proven research ability in the area of Mathematics related to Geometry, and capability in teaching. Salary based on qualifications and experience. 1985/86 minimum is $26,576. Please send curriculum vitae and arrange for three letters of reference to: B. Banaschewski, Chairmen, Mathematics & Statistics, McMaster University, Hamilton, Ontario, L8S 4K1, Canada.

UNIVERSITY OF TORONTO. Department of Mathematics. Applications are invited for limited term Assistant Professorships, beginning July 1, 1986, for a term of up to three years. Duties consist of research and teaching and candidates must demonstrate clear strength in both. *Applications should be sent to Professor D.K. Sen, Associate Chairman, Department of Mathematics, University of Toronto, Toronto, Ontario, Canada, M5S 1A1,* and should include a complete curriculum vitae, and three letters of at least three referees. The deadline is February 15, 1986. In accordance with Canadian Immigration requirements, this advertisement is directed to Canadian citizens and permaneni residents.

DALHOUSIE UNIVERSITY. Department of Mathematics, Statistics and Computing Science. Applications are invited for a tenure-track position in mathematics at the assistant professor level effective July 1, 1986. Requirements are a PhD and proven ability or demonstrated potential for research and teaching. Outstanding candidates in any area of mathematics will be seriously considered but preference will be given to applicants whose research interests substantially complement present department strengths and particularly those in analysis or modern applied analysis. NSERC University Research Fellows in either the third, fourth or fifth year of a URF are particularly encouraged to apply. Send vitae and names of three references to: Dr. H.A. Dye, Chairman, Department of Mathematics, Stats. & Comp Sci., Dalhousie University, Halifax, N.S., Canada, B3H 4H8. In accordance with Canadian immigration requirements, this ad is directed to Canadian citizens or permanent residents of Canada. Dalhousie has a policy of affirmative action with respect to the employment of women.

MEDICINE

UNIVERSITY OF TORONTO. Department of Surgery. The Department of Surgery, University of Toronto requires an experienced general surgeon for the Division of General Surgery at St Michael's Hospital. Must have documented interest in clinical research, postgraduate and undergraduate teaching. This will be an annual appointment, salary and university rank commensurate with qualifications and experience. Qualifications: M.D., FRCS(C). Effective date of appointment January 1, 1986. Closing date for receipt of applications November 30, 1985. Enquiries should be sent to: Dr. J.P. Weddell, Surgeon in Chief, St. Michael's Hospital, 30 Bond Street, Toronto, Ontario, M5B 1W8. In accordance with Canadian immigration requirements, this advertisement is directed to Canadian Citizens and permanent residents.

McGILL UNIVERSITY. Artificial Cells and Organs Research Centre. Research Associate Assistant Professor. Degrees required: Ph.D. Salary: Average $30,000 - depends on experience and background Sub-discipline specialty: Biotechnology In the area of immobilization technology with extensive experience in microencapsulation of multienzymes, cofactor recycling, microorganisms, and cell cultures (Experience in other areas of immobilization technologies, microbiology technology, cell culture technology will be a useful supplement to above). Years of experience: Postdoctoral experience minimal. Research/administration experience: Should have publication and/or research experience in the areas mentioned above Only Canadian or Landed Immigrants to Canada need apply for this position. Applicants should send C.V and 2 letters of reference to: Professor T.M.S. Chang, Director, Artificial Cells and Organs Research Centre, McGill University, 3655 Drummond Street, Montreal, P.Q. Canada, H3G 1Y6.

MONTREAL NEUROLOGICAL INSTITUTE. Neuroimmunology Unit. Applications are invited for the position of tenure-track associate professor in a developing neuroimmunology unit at the Montreal Neurological Institute, Department of Neurology and Neurosurgery, McGill University, beginning February 1986. The applicant must have specialty qualifications in Neurology, a minimum of 4 years additional training in immunology, and/or a established record of research productivity and publication. The incumbent will be expected to form part of a group applying immunological and related technologies in pursuit of basic and clinical research studies of neurologic disease. The minimum McGill scale for associate professor is $35,185.00 in accordance with Canadien Immigration requirements this advertisement is directed to Canadian citizens and permanent residents of Canada. Please address applications, including a curriculum vitae and the names and addresses of 3 referees to Dr. D.W. Baxter, Director, Montreal Neurological Institute, 3801 University, Montreal, Quebec, H3A 2B4 Closing date for receipt of applications is 1 November 1985.

MONTREAL NEURDLOGICAL INSTITUTE. Neuroimmunology Unit. Applications are invited for the position of a tenure-track assistant professor in a developing neuroimmunology unit at the Montreal Neurological Institute, Department of Neurology and Neurosurgery, McGill University, beginning February 1986. The applicant must have specialty qualifications in Neurology, a minimum of 4 years additional training in immunology, and/or a publication record demonstrating potential as an Independent Investigator. The incumbent will form part of a group applying immunological techniques in proposed basic and clinical research studies of neurologic disease. The minimum McGill scale for assistant professor is $30,169.00. In accordance with Canadian immigration requirements this advertisement is directed to Canadian citizens and permanent residents of Canada. Please address applications, including a curriculum vitae and the names and addresses of 3 referees to Dr. D.W Baxter, Director, Montreal Neurofogicel Institute, 3801 University, Montreal, Quebec, H3A 2B4 Closing date for receipt of applications is 1 November 1985.

UNIVERSITY OF ALBERTA. Medicine. *Academic Appointment: Arts - Career Scientist. The University of Alberta* Department of Medicine and the Multart Diabetes Research and Training Centre, Invites applications by senior researchers for the position of Career Scientist in basic or clinical diabetes research. Appointment normally made at full professor rank (current salary $49,901). Distinguished research career in clinical investigation at Ph.D level (preferebly with M.D degree), and demonstrated ability to lead international and multidisciplinary group of scientists required. Original contributions to field and an established and acknowledged reputation also required. Position depends upon successful application for competitive award by external agency. Forward applications, curriculum vitae, outlines of research interest and names of three referees to: Dr. G.D. Molner, Room 8-121B Clinical Sciences Building, University of Alberta, Edmonton, Alb., T6G 2G3. Closing date: November 30, 1985. The University of Alberta is an equal opportunity employer, but, in accordance with Canada Employment and Immigration regulations this advertisement is directed to Canadien citizens and permanent residents.

UNIVERSITY OF ALBERTA. Medicine. Academic Appointment: Alta - Research Scholar The University of Alberta, Department of Medicine, and the Multart Diabetes Research and Training Centre, Invites applications for Research Scholar, Division of Endocrinology and Metabolism at the assistantassociate professor ($30,316-$43,780 - $38,170 - $55,450) rank. Candidate must have M.D. and/or Ph.D. degree(s). Preference will be given to Investigators with postdoctoral training in diabetes research and demonstrated outstanding potential for an independent research career. Long term position funded through an external agency, but incumbent will enjoy privileges of the university academic rank Awards granted by competition and excellence Forward curriculum vitae, outlines of research interests and names of three referees to: Dr. G.D. Molnar, Department of Medicine, Room 8-121B Clinical Sciences Bldg., University of Alberta, Edmonton, Alta., T6G 2G3. Closing date: November 30, 1985. The University of Alberta is an equal opportunity employer but, in accordance with Canada Employment and Immigration regulations, this advertisement is directed to Canadian citizens and permanent residents.

McGILL UNIVERSITY. Medicine. Applications are now being accepted by McGill University, Dept. of Obstetrics and Gynecology for the following position in the perinatal division: Obstetrician/Gynecologist with postdoctoral training in biochemistry is appointed as an Assistant Professor level with e joint appointment in Biochemistry. Qualifications require ABOG certified or qualified, PhD in biochemistry or equivalent, intimate knowledge of RIA techniques. Background in metabolism and clinical studies is highly desirable. Position starting academic year 1986-87. Starting salary for an Assistant Professor $30,000 (Canadian). Applications and curriculum vitae should be forwarded to A.B. Little, M.D., Chairmen, Dept. of Obs/Gyn, McGill University, Faculty of Medicine, RVH, Women's Pavilion, 687 Pine Avenue W., Montreal, Que., H3A 1A1, Canada. This position is open to both sexes and in accordance with Canadian immigration requirements, preference will be given to Canadian citizens and permanent residents. Deadline for application is October 31, 1985.

UNIVERSITY OF TORONTO. C.H. Best Foundation. Applications are invited in Diabetes Research, Mofecular Endocrinology, Molecular Biology, Differentiation, Reproductive Biology, Immunology, Structure and Function of Mambranes or Lipid Metabolism. Tenable in the Banting and Best Department of Medical Research for two years after July 1, 1985 with a competitive stipend. Available to new PH.D.'s or candidates with less than two years postdoctoral experience. Send curriculum vitae, transcripts and three letters of reference preferably before November 1, 1985 to: Dr. Terry Hazen, Executive Secretary Committee Chairman, Banting and Best Department of Medical Research, University of Toronto, Toronto, Ontario, Canada, M5G 1L6.

UNIVERSITY OF TORONTO. Medicine. 1. University Department: Pediatrics 2. University Hospital: The Hospital for Sick Children 3. Qualifications Required: F.R.C.P (C) in Pediatrics; Minimum 2 years specialty training in neonatology including a minimum of 6 months experience in a perinatal setting and 6 months in a neonatal follow-up program; Research experience in perinatology 4. Nature of Duties: One of team of 4 pediatric perinatologists in a University High Risk Perinatal Unit with 4200 deliveries per year, 20 tertiary and 30 intermediate neonatel beds. Duties include shared supervision of the neonatal service and follow-up program, undergraduate and postgraduate teaching, and active participation in basic or clinical research in perinatal medicine. 5. Salary: Competitive, commensurate with training and experience. 6. Person to Whom Enquiries Should be Made: Dr. P.M. Filzherdinge, Chief of Pediatrics, Mount Sinai Hospital, 600 University Avenue, Room 775, Toronto, Ontario, M5G 1X5, Canada. 7. A Effective Date of Appointment: January 1st, 1986. B. Type of Appointment: Limited Duration Annual. C. Closing Date for Receipt of Applications: November 30th, 1985. In accordance with Canadian Immigration requirements, this advertisement is directed to Canadian citizens and permanent residents.

MICROBIOLOGY

UNIVERSITY OF SASKATCHEWAN. Microbiologist. The Saskatchewan Institute of Pedology invites applications *for a grain legume soil-organic matter research position, commencing immediately.* Minimal requirements include a Ph.D. in Microbiology (Soil). Preference will be given to candidates with experience in using 15 N. The successful applicant will join a team of scientists developing and evaluating a new water efficient cropping system for the parkland region of the province. The appointment will be for a period of one year, renewable for another year. Depending on appointment salary will range from that for a post-doctorate to an assistant professor, depending on qualifications and experience. In accordance with Canadian immigration requirements, Canadien citizens and landed immigrants will be given first priority. Interested candidates are invited to send applications to D.A. Rennie (Phone 306-966-4050), Dean, College of Agriculture, University of Saskatchewan, Saskatoon, Saskatchewan, S7N 0W0.

THE UNIVERSITY OF ALBERTA. Microbiology.

Microbiologist/Biotechnologist. The Department of Microbiology, University of Alberta Invites applicetions for a tenure track position at the Assistant Professor level. Candidates must have a Ph.D. with post-doctoral or equivalent industrial experience. The successful candidate will teache senior level course on the theory of fermentation and the Multart Diabetes Research and Training Centre, Invites applications for Research Scholar, Division of Endocrinology and Metabolism at the assistantassociate professor ($30,316-$43,780 - $38,170 - $55,450) rank. Candidate must have M.D. and/or Ph.D. degree(s). Preference will be given to Investigators with postdoctoral training in diabetes research and demonstrated outstanding potential for an independent research career. Long term position funded through an external agency, but incumbent will enjoy privileges of the university academic rank Awards granted by competition and excellence Forward curriculum vitae, outlines of research interests and names of three referees to: Dr. G.D. Molnar, Department of Medicine, Room 8-121B Clinical Sciences Bldg., University of Alberta, Edmonton, Alta., T6G 2G3. Closing date: November 30, 1985. The University of Alberta is an equal opportunity employer but, in accordance with Canada Employment and Immigration regulations, this advertisement is directed to Canadian citizens and permanent residents.

McGILL UNIVERSITY. Microbiology. Applications are invited for the position of tenure-track assistant professor in a developing neuroimmunology unit at the Montreal Neurological Institute, Department of Neurology and Neurosurgery, McGill University, beginning February 1986. The applicant must have specialty qualifications in Neurology, a minimum of 4 years additional training in immunology, and/or a publication record demonstrating potential as an Independent Investigator. The incumbent will form part of a group applying immunological techniques in proposed basic and clinical research studies of neurologic disease. The minimum McGill scale for assistant professor is $30,169.00. In accordance with Canadian immigration requirements this advertisement is directed to Canadian citizens and permanent residents of Canada. Please address applications, including a curriculum vitae and the names and addresses of 3 referees to Dr. D.W Baxter, Director, Montreal Neurofogicel Institute, 3801 University, Montreal, Quebec, H3A 2B4 Closing date for receipt of applications is 1 November 1985.

UNIVERSITY OF ALBERTA. Medicine. *Academic Appointment: Arts - Career Scientist. The University of Alberta* Department of Medicine and the Multart Diabetes Research and Training Centre, Invites applications by senior researchers for the position of Career Scientist in basic or clinical diabetes research. Appointment normally made at full professor rank (current salary $49,901). Distinguished research career in clinical investigation at Ph.D level (preferebly with M.D degree), and demonstrated ability to lead international and multidisciplinary group of scientists required. Original contributions to field and an established and acknowledged reputation also required. Position depends upon successful application for competitive award by external agency. Forward applications, curriculum vitae, outlines of research interest and names of three referees to: Dr. G.D. Molner, Room 8-121B Clinical Sciences Building, University of Alberta, Edmonton, Alb., T6G 2G3. Closing date: November 30, 1985. The University of Alberta is an equal opportunity employer, but, in accordance with Canada Employment and Immigration regulations this advertisement is directed to Canadien citizens and permanent residents.

UNIVERSITY OF ALBERTA. Medicine. Academic Appointment: Alta - Research Scholar The University of Alberta, Department of Medicine, Room 8-121B Clinical Sciences Bldg., University of Alberta, Edmonton, Alta., T6G 2G3. Closing date: November 30, 1985. The University of Alberta is an equal opportunity employer but, in accordance with Canada Employment and Immigration regulations, this advertisement is directed to Canadian citizens and permanent residents.

McGILL UNIVERSITY. Music. 1. Tenure track appointment at the rank of Assistant Professor. Doctorate in musicology; Renaissance or Classical specialization preferred; the Department is searching for a productive research musicologist 3. Teaching of undergraduate history and graduate musicology; graduele theirs supervision. 4. $30,169; (1985-86 base). 5. Send curriculum vitae and three lattors of reference to Prof. D.B. Minorgan, Chairman, Department of Theory, Faculty of Music, McGill University, 555 Sherbrooke St. West, Montreal, PQ, H3A 1E3. 6. Effective: September 1, 1986. 7. Deadline: November 1, 1985. 8. In accordance with Canadian Immigrantion requirements, this advertisement is directed in the first instance to Canadian citizens and permanent residents.

NATIVE STUDIES

DALHOUSIE UNIVERSITY. Native Studies. Applications are invited for a half time Instructor position to teach one course in Native Studies and perform related duties as assigned by the Director and act as the Program's resource person for Native history and culture. The initial appointment will be for three years commencing January 1, 1986. Qualifications include a thorough understanding of Native culture and history preferably with training in education or social work. The ability to speak Micmac would be an asset. Deadline for receipt of applications is December 8, 1985. Please forward curriculum vitae and names of three referees to Dr. Karolyn Waterson, Director, Transition Year Programme, 1459 LeMarchant St., Halifax, N.S., B3H 3J5. In accordance with Canadian immigration requirements, this ad is directed to Canadian citizens or permanent residents of Canada. Dalhousie has a policy of affirmative action with respect to employment of women.

OCEANOGRAPHY

McGILL UNIVERSITY. Institute of Oceanography. Applications are invited from Canadian citizens and permanent residents who have been sponsored for an NSERC University Research Fellowship in the field of biological oceanography with a research interest in nutrient chemistry and primary production or physicel oceanography. Demonstrated teaching and research abilities are required. Ability to communicate in English and French will be a definite assat. The Institute has current and planned activities in the Gulf of St. Lawrence and in Canadian and Northern waters preference will be given to candidates with compatible research interests. The Institute has close research ties with the Arctic Biological Station, Ste Anne de Bellevue, Fisheries and Oceans, Quebec, and the Groupe Interuniversitaire de Recherches Oceanographiques du Quebec. Salary will be in the Assistant Professor range. Candidates should send applications, with full curriculum vitae and arrange for three letters of recommendation to be sent to Prof. J.B. Lewis, Institute of Oceanography, McGill University, 3620 University Street, Montreal, Quebec, H3A 2B2.

PHILOSOPHY

YORK UNIVERSITY. Faculty of Arts. Philosophy. Position: Assistant Professor, three-year limited term. Limited Qualifications: Ph.O. or equivalent in Philosophy, teaching experience and publications. Main area of specialization: Ancient Philosophy but must show interest and demonstrated expertise in other areas of Philosophy as well. Duties: Undergraduate and graduate teaching and supervision. Appointment effective July 1, 1986, pending University approval. Applications, including curriculum vitae and at least three letters of academic referees should be sent to: Chairmen, Department of Philosophy, York University, 4700 Keele Street, North York, Ontario, Canada, M3J 1P3. Applicaiton deadline: November 15, 1985. This advertisement is directed to Canadian citizens and permanent residents.

QUEEN'S UNIVERSITY. Philosophy. The Philosophy Oeparlment at Queen's University invites applications for an appointment at the rank of Assistant Professor, beginning 1 July, 1986. The appointment is for one year in the first instance but may be renewed for a second year, for a two year maximum. Ph.D. required. Specialization open. Salary commensurate with qualifications. Send curriculum vitae, and three letters of reference, to Professor A.P. Fell, Chairman, Department of Philosophy, Queen's University, Kingston, Ontario, Canada, K7L 3N6. Closing date for receipt of applications, 15 December, 1985. Both women and men are encouraged to apply. In accordance with Canadian Immigration requirements this advertisement is directed to Canadran citizens and permanent residents.

PHYSICS

UNIVERSITY OF WATERLOO. Physics. The Oepartment of Physics is offering several postdoctoral fellowships for research in the areas of experimental and theoretical solid state physics, biophysics, atomic and molecular physics, quantum optics and energy conversion and storage. The fellowships are for a period of 1 year and are renewable for a second year by mutual agreement. Some teaching may be required. Enclosed a brochure outlining current research programs will be sent on request. Applicants should send a resume and names of 3 references to Prof. W. Boswell, Department of Physics, University of Waterloo, Waterloo, Ontario, Canada, N2L 3G1. In accordance with Canadian Immigration requirements, this advertisement is directed to Canedian citizens and permanent residents.

UNIVERSITY OF ALBERTA. Department of Physics. Applications are invited for a Research Associate in Condensed Matter Physics. The position is for at least one year commencing as soon as possible after 01 January 1986, and may be renewed. Candidates must possess a Ph.D. in Physics and at least two years experience in experimental research and liquid helium temperatures. The successful candidate will work with a 3He-4He dilution refrigerator and various other cryostats, some with SQUID instrumentation; also rf and erc furnaces for specimen preparation. Some teaching may be required. The starting salary will be at least $23,000 and applicetions will be received until October 31, 1985. The University of Alberta is an equal opportunity employer, but in accordance with Canadian Government immigration regulations, this advertisement is directed towards Canadian citizens and permanent residents. Applicants should submit their curriculum vitae and the names of three referees to: Dr. S.B. Woods, Department of Physics, University of Alberta, Edmonton, Alberta, Canada, T6G 2J1. (Tel. 403-432-4130).

DALHOUSIE UNIVERSITY. Department of Physics. Applications are being accepted for a Research Associate to conduct theoretical studies in condensed matter physics especially at zero temperature. Qualifications include Ph.D. in theoretical physics and at least two years postdoctoral research experience. The position is available for one to two years commencing January 1, 1986 at a salary of $20,000 pa annum minimum. Application deadline is November 30, 1985. Curriculum vitae and names of three referees to Dr. O.D. Betts, Faculty of Arts and Science, Dalhousie University, Halifax, N.S., B3H 4H6. In accordance with Canadian immigration requirements, this ad is directed to Canadian citizens or permanent residents of Canada. Dalhousie has a policy of affirmative action with respect to employment of women.

DALHOUSIE UNIVERSITY. Department of Physics. The Physics Department of Dalhousie University invites applications for a tenure track Assistant Professorship in experimental physics, beginning July 1, 1986. NSERC University Research Fellows in either third, fourth or fifth year of URF are particularly encouraged to apply. It is anticipated that the successful candidate's interests will lie in the broad area of Condensed Matter Physics. Current interests of the department include Low Temperature, Surface, Optical, Medical and Applied Physics, Critical Phenomena, Amorphous Materials and Low Dimensional Systems in accordance with Canadian immigration requirements, this advertisement is directed to Canadian citizens and permanent residents of Canada. Dalhousie has a policy of affirmative action with respect to employment of women. Applications, consisting of a curriculum vitae, list of publications, summary of research interests, and the names of three referees should be sent to: Dr. D.J.W. Geldart, Chairman, Department of Physics, Dalhousie University, Halifax, Nova Scotia, Canada, B3H 3J5; Telephone: (902) 424-2339

PHYSIOLOGY

QUEEN'S UNIVERSITY. Department of Physiology. Neuroendocrinologist. A vacancy exists for an experienced neuroendocrinologist. The preferred applicant should have the Ph.D. and/or the M.D. degree, several years teaching experience and a record of independent research of high quality. The applicant will be expected to lead an active research program and to participate in undergraduate and graduate teaching. The facilities for research are outstanding and the appointment is a regular tenured or tenure regulations. The appointment will be at a level appropriate to the candidate's qualifications. In accordance with Canadian immigration requirements priority will be given to Canadian citizens and permanent residents and applications are encouraged from candidates of either sex. Applicants should send a curriculum vitae, a brief statement of their research interests and objectives, selected reprints, and the names of three referees from whom confidential assessment of research end teaching abilities may be obtained to: Dr. V.C. Abrahams, Department of Physiology, Queen's University, Kingston, Ontario, Canada, K7L 3N6. (Second Advertisement).

POLITICAL SCIENCE

McGILL UNIVERSITY. Political Science. The Department of Political Science, McGill University, invites applications for a tenure track position in Canadian Government and Politics at the rank of Assistant Professor, beginning September 1, 1986 (subject to budgetary approval). The areas of specialization within Canadian politics are open. Applicants should have a Ph.D. in Political Science and, preferably, teaching experience as well as publications. The salary will be commensurate with qualifications. The deadline for applications is December 15, 1985 or until the position is filled. Applicants should send a curriculum vitae, transcripts and the names of three referees should be sent to: Professor Paul Noble, Chairman, Department of Political Science, McGill University, 855 Sherbrooke St. West, Montreal, Quebec, H3A 2T7. In accordance with immigration requirements, this advertisement is directed to Canadian citizens and permanent residents. **THE UNIVERSITY OF BRITISH COLUMBIA. Political Science.** A junior tenure-track position will be available subject to funding starting July 1, 1986 in the Department of Political Science. The appointment will be in the area of Japanese politics (domestic and foreign policy), and/or Southeast Asian politics. The candidate must be able to teach and conduct research in one or more of these areas, must have suitable language training, and should be able to teach comparative politics generally. A completed Ph.D. or equivalent is expected, as is evidence of research commitment. Salary will be commensurate with qualifications and experience. Closing date: January 31, 1986 In accordance with Canadian immigration requirements, this advertisement is directed to Canadian citizens and permanent residents. The University of British Columbia offers equal opportunity for employment to qualified male and female candidates. Curriculum vitae and three letters of reference should be sent to Professor D.J. Elkins, Chairmen, Department of Political Science, The University of British Columbia, Vancouver, B.C., V6T 1W5.

PSYCHOLOGY

YORK UNIVERSITY. Psychology. Postdoctoral Assistant, to work on visual orientation problems including vestibular and optokinetic nystagmus. Candidates should be familiar with psychophysics, experimental design and computers. Knowledge of electronics and basic physics an advantage. Starting date: before Christmas 1985 for 2 years. 2 years. In accordance with Canedien Immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada. Applications to: Professor Ian P. Howard, Department of Psychology, Faculty of Aits, York University, North York, Ontario, M3J 1P3, by November 1, 1985.

UNIVERSITY OF MANITOBA. Psychology. Applications are invited for a probationary tenure track appointment at the assistant or possibly associate professor level (depending on qualifications) in the Department of Psychology, in the area of quantitative methods. Applicants should be research methodologists. Expertise in the design and analysis of quasi-experimental research, including the analysis of clinical and single-organism experiments, and causal/structural modelling is preferred. Will be required to be given to those with research interests as above, persons majoring in and conducting research in any area of quantitative psychology will be considered. The successful candidate will be expected to supervise graduate students in the quantitative area and provide consultative service to about 45 staff and 130 graduate students. Current salary floor for assistant professors is $27,101 (under review). The University encourages both women and men to apply for positions. In accordance with Canadian immigration requirements, this advertisement is directed to Canadian citizens and permanent residents. Interested candidates should send their curriculum vitee, reprins and letters of recommendation to Dr. Milton Wiener or Janisse Ramsden, Department of Psychology, University of Manitoba, Winnipeg, Manitoba, R3T 2N2. The appointment should be effective. Application deadline: January 1, 1986.

YORK UNIVERSITY. Faculty of Arts. One or more positions, both tenure stream and contractually-limited, to be available from July 1, 1986 in the Department of Psychology (pending University approval). Area of specialization and rank open. Scholars with exceptional records of research achievement are invited to apply. Enquiries, and applications with three letters of reference and a curriculum vitae, should be sent to Dr. Ronald Sheese, Chairman, Department of Psychology, York University, North York (Toronto), Ontario, M3J 1P3. Closing date for applications is December 1, 1985. In accordance with Canadian immigration requirements, this advertisement is directed to Canadian citizens and permanent residents.

UNIVERSITY OF TORONTO. ERINDALE CAMPUS. Department of Psychology. A position in Neuropsychology *for up to* two years (Limited Duration Annual contract not more then three years). Research interest in neuropsychology, with specialization in memory, deception, or hemispheric specialization is desirable. Ample opportunity for collaborative research in a clinical or laboratory setting; light teaching load. Salary commensurate with experience, but the position is presently construed as teaching/post-doctoral or assistant professor. Current salary base scale for Assistant Professor is $27,000. We are looking for candidates who are committed to excellence and productivity in research and teaching. Interested candidates should write to Professor Ailson Fleming at the Psychology Department, University of Toronto, Erindale College, Mississauga Road, Mississauga, Ontario, L5L 1C6. Closing date for receipt of applications is January 1, 1986. In accordance with Canadian immigration requirements, this advertisement is directed to Canadian citizens and permanent residents.

UNIVERSITY OF WATERLOO. Department of Psychology. Applications are invited for an anticipated opening in Clinical Psychology at the assistant professor level. Any specialty area within Clinical Psychology will be considered A recent Ph.D. in Clinical Psychology, with a one-year clinical internship, is required. Candidates must also show evidence indicating a strong commitment to the development of an active research program. Responsibilities will include teaching at both the undergraduate and graduate levels and supervision of both graduate research and clinical activities. The salary is competitive. Appointment will commence either July 1 or September 1, 1986. Applicants should submit a curriculum vitae and samples of scholerly work and should arrange to have at least three letters of recommendation sent directly to Dr. Philip M. Merikle, Chair, Department of Psychology, University of Waterloo, Waterloo, Ontario, N2L 3G1. To ensure consideretion eli materials should be received by November 15, 1985. In accordence with Canedian immigration requirements, this advertisement is directed to Canadian citizens and permanent residents of Canada. The availability oi this position is subject to budgetary approvel.

UNIVERSITY OF WATERLDD. Department of Psychology. Applications are invited for an anticipated opening in Industrial/Organizational Psychology at the assistant professor level. Any specialty area within I/O Psychology will be considered. A recent Ph.D. in I/O Psychology is required, and candidates must show evidence indicating a strong commitment to the development of an active research program. Respon-

sibilities will include teaching at both the undergraduate and graduate levels and supervision of student research. The salary is competitive. Appointment will commence either July 1 or September 1, 1986. Applicants should submit a curriculum vitae and samples of scholarly work and should arrange to have at least three letters of recommendation sent directly to Dr. Philip M. Merikle, Chair, Department of Psychology, University of Waterloo, Waterloo, Ontario, N2L 3G1. To ensure consideration all materials should be received by November 15, 1985. In accordance with Canadian immigration requirements, this advertisement is directed to Canadian citizens and permanent residents of Canada. The availability of this position is subject to budgetary approval.

ACADIA UNIVERSITY. Department of Psychology. Acadia University anticipates one tenure-track position on the Assistant Professor level in developmental psychology, beginning July, 1986. We are interested in candidates with an active research record and a desire to teach on the undergraduate level. Possible courses include Child Psychology, Adolescent Psychology, Cognitive Development, and/or Aging. In accordance with Canadian immigration requirements, this advertisement is directed in the first instance to Canadian citizens and permanent residents. Send vite and three references to: Dr. Michael P. Letter, Head, Psychology Department, Acadia University, Wollville, Nova Scotia, B0P 1X0.

McGILL UNIVERSITY. Psychology. Halftime, non-tenured faculty position in Clinical Psychology with possibility of additional half-time research position at the Department of Psychiatry, Jewish General Hospital, also possible cross appointment in the Faculty of Medicine. Please send a curriculum vitae, recent research papers and a short statement of current research interest. Three letters of recommendation should also be forwarded. In accordance with Canadian immigration requirements, this advertisement is directed to Canadian citizens and permanent residents. Address replies to Dr. I. Binik, Department of Psychology, McGill University, 1205 Ave. Dr. Penfield, Montreal, Quebec, H3A 1B1.

THE UNIVERSITY OF BRITISH COLUMBIA. Psychology. Department of Psychology, University of British Columbia invites applications for a tenure track faculty position at the Assistant Professor level beginning July 1, 1986. Candidates should have a Ph.D. in Psychology and be trained and actively involved in research primarily in the area of developmental psychology. The responsibilities are those appropriate to a research oriented doctoral programme and include supervision of graduate student research and undergraduate and graduate teaching. Applicants must be able to show strong research commitment and achievement demonstrated by published work, as well as a dedicated interest in teaching. The position is contingent upon budgetary considerations. The University of British Columbia offers equal opportunity for employment to qualified female and male applicants. In accordance with Canadian immigration requirements this advertisement is directed to Canadian citizens and permanent residents (landed immigrants) of Canada. Send complete curriculum vitae, reprints and the names of at least three professional referees to Chairman, Faculty Search Committee, Department of Psychology, University of British Columbia, Vancouver, B.C., V6T 1Y7, Canada. Closing date for applications is December 31, 1985

THE UNIVERSITY OF BRITISH COLUMBIA. Psychology. Department of Psychology, University of British Columbia invites applications for a tenure track faculty position at the Assistant Professor level beginning July 1, 1986. Candidates should have a Ph.D. in Psychology and be trained and actively involved in research primarily in the area of clinical psychology. Preference will be given to candidates with clinical qualifications that make them eligible for registration in B.C. The responsibilities are those appropriate to a research oriented doctoral programme and include supervision of graduate student research, clinical work, and undergraduate and graduate teaching. Applicants must be able to show strong research commitment and achievement demonstrated by published work, as well as a dedicated interest in teaching. The position is contingent upon budgetary considerations. The University of British Columbia offers equal opportunity for employment to qualified female and male applicants. In accordance with Canadian immigration requirements this advertisement is directed to Canadian citizens and permanent residents (landed immigrants) of Canada. Send complete curriculum vitae, reprints and the names of at least three professional referees to Chairman, Faculty Search Committee, Department of Psychology, University of British Columbia, Vancouver, B.C., V6T 1Y7, Canada. Closing date for applications is December 31, 1985.

RELATIONS INDUSTRIELLES

UNIVERSITE LAVAL. Faculté des sciences sociales. Professeur en relations industrielles. Description: Oiganser les enseignements de base en sociologie des sociétés Industrielles, en sociologie du travail et des relations professionnelles aux niveaux du premier cycle et des études gradutes. Participer aux activités de recherche et de publication ainsi qu'aux divers aspects de la vie interne et externe du Département. Qualifications: Doctoret en relations industrielles ou l'équivalent dans una discipline appropriée. Date d'entrée en fonction: 1er juin 1986. Traitement: Selon la convention collective. Communiquer confidentiellement le curriculum vitae avant le 15 novembre 1985 à: Laurent Bélenger, directeur, Département des relations Industrielles, Faculté des sciences sociales, Université Level; Québec, G1K 7P4.

RELIGIOUS STUDIES

THE UNIVERSITY OF LETHBRIDGE, Faculty of Arts and Science. Religious Studies. 1 Title: Assistant Professor. 2. Qualifications: PhD and teaching experience. The position involves the teaching of undergraduate courses. Specialization in Christianity with competence to teach introductory World Religions. 3. Responsibilities: Teaching undergraduate courses and a commitment to do research. 4 Minimum salary 1984-85: Assistent Professor $26,319, subject to revision. 5. Applications should include a curriculum vitae, transcripts, samples of published work, and the names of three referees which should be sent to: Dr. D.W. Atkinson, Chairman, Religious Studies Program, The University of Lethbridge, Lethbridge, Alberta, T1K 3M4 6. Effective Date: July 1, 1986. 7. Closing Date: October 31, 1985. 8. In accordance with Canadian Immigration Regulations, this advertisement is directed to Canadian citizens and permanent residents.

SOCIOLOGY

YORK UNIVERSITY. Faculty of Arts. Applications are invited for a tenure-stream appointment at rank open, in the Department of Sociology, commencing July 1, 1986. This position is offered pending university approval. The area of specialization is women's studies and feminist theory. A Ph.D. in Sociology, an established record of scholarship, and demonstrated skills in teaching are required. Complementary areas of sociological specialization are open. The teaching of core courses in sociology, including introductory sociology, is expected. Rank and salary depend on qualifications. Send curriculum vitae, a cover letter stating interests relevant to this position, copies of recent publications, and the names of three referees to: Professor A. H. Turritin, Chairperson, Department of Sociology, Faculty of Arts, York University, North York (Toronto), Ontario, M3J 1P3. Application deadline is November 1, 1985. In accordance with Canadian immigration requirements, this advertisement is directed to Canadian citizens and permanent residents.

YORK UNIVERSITY. Faculty of Arts. Applications are invited for a tenure-stream appointment, rank open, in the Department of Sociology, commencing July 1, 1986. This position is offered pending university approval. The area of specialization is the sociology of deviance and social control. A Ph.D. in Sociology, an established record of scholarship, and demonstrated skills in and commitment to teaching are required. Complementary areas of specialization are open. The teaching of core courses in sociology including introductory sociology is expected. Ability to teach criminology is desirable. Rank and salary depend on qualifications. Send curriculum vitae, a cover letter stating interests relevant to this position, copies of recent publications, and the names of three referees to: Prof. A.H. Turritin, Chairperson, Department of Sociology, Faculty of Arts, York University, North York (Toronto), Ontario, M3J 1P3. Application deadline is November 1, 1985. In accordance with Canadian immigration requirements, this advertisement is directed to Canadian citizens and permanent residents.

SPANISH

UNIVERSITY OF ALBERTA. Faculty of Arts. The Departments of Romance Languages and Comparative Literature invite applications for a tenure-track appointment split equally between Spanish and Comparative Literature at the Assistant Professor level commencing July 1, 1986. Ph.D. and native or near-native language proficiency are required. For the appointment in Comparative Literature, appropriate training and research achievements and promise are requisite. For the Spanish component, excellence in teaching and versatility are essential. The successful candidate will be expected to teach Spanish language and literature at the undergraduate level and participate in the graduate programs in Spanish and Comparative Literature. The 1985-86 floor of Assistant Professor is 30,316. Applications, to include C.V. and the names of three referees, are to be sent either to the Chairman, Department of Romance Languages, or the Chairman, Department of Comparative Literature, University of Alberta, Edmonton, Alberta, Canada, T6G 2E5, and will be accepted until December 1, 1985. Applicants are urged to track their referees to send letters of reference immediately. The University of Alberta is an equal opportunity employer. In accordance with the Canadian Immigration requirements, this advertisement is directed to Canadian citizens and permanent residents. The position is subject to confirmation of funding.

STATISTICS

McMASTER UNIVERSITY. Department of Mathematics & Statistics. The Department of Mathematics & Statistics, McMaster University, invites applications for a tenure track Assistant Professorship starting July 1, 1986. Candidates should have a Ph.D. and proven research ability in some area of Statistics, as well as capability in teaching. Salary based on qualifications and experience. 1985/86 minimum is $26,576. In accordance with Canadian Immigration requirements, this advertisement is directed to Canadian Citizens and permanent residents. Please send curriculum vitae and arrange for three letters of reference to: B. Banaschewski, Chairman, Mathematics & Statistics, McMaster University, Hamilton, Ontario, L8S 4K1, Canada.

McMASTER UNIVERSITY. Department of Mathematics & Statistics. The Department of Mathematics & Statistics, McMaster University, invites applications for a two-year contractual Assistant Professorship starting July 1, 1986. Candidates should have a Ph.D. and proven research ability in some area of Mathematics or Statistics, as well as capability in teaching. Salary based on qualifications and experience. 1985/86 minimum is $26,576. In accordance with Canadian Immigration requirements, this advertisement is directed to Canadian Citizens and permanent residents. Please send curriculum vitae and arrange for three letters of reference to: B. Banaschewski, Chairman, Mathematics & Statistics, McMaster University, Hamilton, Ontario, L8S 4K1, Canada.

UNIVERSITY OF ALBERTA. Statistics. The Department of Statistics and Applied Probability invites applications for a tenure track position at the full professor level. Applicants must have an established international research reputation in the areas of Filtering, Stochastic Control Theory, Differential Equations and Applications. Effective date July 1, 1986. Minimum starting salary $48,970 and is negotiable depending on qualifications. The University of Alberta is an equal opportunity employer, but, in accordance with Canadian immigration requirements, this advertisement is directed to Canadian citizens and permanent residents. Interested individuals should send curriculum vitae and names of three referees to: Dr. J.R. McGregor, Department of Statistics and Applied Probability, University of Alberta, Edmonton, Alberta, Canada, T6G 2G1. Closing date for applications: November 1, 1985.

VETERINARY MEDICINE

UNIVERSITY OF GUELPH. Department of Veterinary Microbiology and Immunology. A faculty position is available in the Department of Veterinary Microbiology and Immunology, University of Guelph. Duties include undergraduate and graduate teaching, the supervision of candidates for higher degrees, and population oriented research in veterinary public health, including food hygiene (e.g. microbial and toxic residues) and zoonoses. Applicants should hold a DVM or equivalent degree in veterinary medicine, plus advanced degrees and research experience relating to veterinary public health. Salary for this probationary (tenure track) position is commensurate with qualifications and experience. This position is subject to final budgetary approval. Enquiries and applications, including the names of three referees, should be directed to Dr. A.H. Meek, Chairman, Department of Veterinary Microbiology and Immunology, University of Guelph, Guelph, Ontario, N1G 2W1.

UNIVERSITY OF SASKATCHEWAN, WESTERN COLLEGE OF VETERINARY MEDICINE. Veterinary Clinical Epidemiologist. Applications are invited for a faculty position (tenure track) in clinical epidemiology. This is a new position created to implement the increased emphasis being placed on herd medicine. The successful candidate will take an active role in the teaching and continuing development of this exciting and important area of clinical veterinary medicine. The staff and facilities of the computerized Animal Health Data Laboratory are fully accessible to this new position. Also, the successful candidate will be a vital working member of the health management team in the provision of clinical preventive medicine programs and clinical investigations on a herd basis. Clinical research opportunities will be encouraged and expected. Qualifications: D.V.M. degree or equivalent, eligible for licensure in Saskatchewan and post graduate training (preferably to the Ph.D. level) in epidemiology. Salary and rank will be commensurate with training and experience. In accordance with Canadian immigration requirements, this advertisement is directed to Canadian citizens and permanent residents. Applicants should submit curriculum vitae plus names of 3 references to Dr. C.S. Rhodes, Head, Department of Herd Medicine and Theriogenology, University of Saskatchewan, Saskatoon, Saskatchewan, S7N 0W0. (306 - 966-7145).

UNIVERSITY OF GUELPH. Department of Pathology. Post-Doctoral Fellow/Research Associate to carry out research in molecular Parasitology. Ph.D. in Parasitology with experience in the area of molecular biology. Post-doctoral experience an asset. Subject to availability of funds, the positions will be filled when a suitable candidate is found. Candidates should submit their curriculum vitae to Dr. M.A. Fernando, Department of Pathology, Ontario Veterinary College, University of Guelph, Guelph, Ontario, Canada, N1G 2W1.

VISUAL ARTS

YORK UNIVERSITY. Faculty of Arts. The Division of Humanities, Faculty of Arts, York University, invites applications for a tenure-track appointment in the area of the visual arts and their relation to culture, to commence on July 1, 1986. This appointment is subject to budgetary approval. Candidates should have appropriate scholarly strengths to teach an upper-level course in the visual arts and Canadian culture, and more broadly in the Western Cultural tradition, in interdisciplinary courses from the first to fourth years. A Ph.D. (or the equivalent) is required. Track rank will depend on qualifications and experience. Letters with the names of three referees should be sent by January 17, 1986, to Professor William White, Chair, Division of Humanities, York University, 4700 Keele Street, Downsview, Ontario, M3J 1P3. In accordance with Canadian immigration requirements, this advertisement is directed to Canadian citizens and permanent residents.

FACULTY EXCHANGE CENTRE

THE FACULTY EXCHANGE CENTRE, non-profit, faculty-administered, helps arrange teaching and/or housing exchanges in North America and overseas. For details send self-addressed envelope and two postal coupons to 952 Virginia Avenue, Lancaster, Pennsylvania, U.S.A., 17603.

Strike at Laurentian leads to new two-year contract

Faculty members at Laurentian University went on a legal strike for three days in September. The impasse that led to the strike came over the question of salaries. The Laurentian Faculty Association was attempting to secure an agreement that would move its members to the Ontario average salary.

The President of CAUT, E.O. Anderson, joined the picket line the first day of the strike on September 9th. Bill Jones, the President of OCUFA, was also present on the picket line. Al Sharp, CAUT Vice-President (External) and Tina Head from the CAUT office assisted with the negotiations during the strike.

Trustees of the CAUT Defence Fund unanimously voted to provide funds for strike pay. Weekly strike pay would amount to $150 per striking member following a two-week waiting period. In addition, when the university administration threatened the cancellation of such employee benefits as life insurance, health plans and the like, the Trustees loaned LUFA $41,243 from the Defence Fund to cover the September costs of these plans to ensure that they were maintained. An agreement by the University to reimburse the Defence Fund was included in the back-to-work agreement signed by both parties.

The parties reached a new two-year contract through intensive negotiations during the strike. The settlement involved a 5% increase in the first year followed by COLA plus 1%. In addition an extra step was added at the top of the full professor grid. It will also be possible for members of the bargaining unit to pierce the caps in the rank by the number of merit increases received in that rank. New criteria for promotion were established.

A research fund paid by the university was created for the use of the members of the bargaining unit. A joint consultative council was put in place with the hope that this might settle some grievances prior to arbitration.

IN/PRINTS

Books received by The Bulletin. Unless otherwise noted, information was supplied by the publisher. Some books may be reviewed later.

***WHY MANY COLLEGE TEACHERS CANNOT LECTURE: How To Avoid Communication Breakdown In The Classroom,* Jon G. Penner;** Charles C. Thomas, Illinois, U.S.A., 1984. A volume designed to make university teachers more aware of the techniques of communicating information to students, training them to think for themselves, and inspiring them to develop intellectually and culturally. The author teaches at Lake Michigan College.

SCHOLARSHIP AND ITS SURVIVAL: Questions On The Idea of Graduate Education, Jaroslav Pelikan, The Carnegie Foundation for the Advancement of Teaching, Princeton University Press, New Jersey, 1983. In this exploration of graduate education, the author suggests we face an oversupply of teachers and an undersupply of scholars, leading to a technological society bereft of critical intelligence in history, literature and philosophy. Prof. Pelikan teaches at Yale.

TRYING FREEDOM: The Case For Liberating Education, Richard Meisler, Harcourt Brace Jovanovich, New York, 1984. A book which recommends significant alterations in educational practice and favors increased student freedom. The author believes universities have become too rigid and authoritarian. "The major barrier to freedom in education is the large group of faculty that finds the concept abhorrent...", The author has taught at Antioch College.

announcing...

CAUT STATUS OF WOMEN WORKSHOP

January 31 - February 1, 1986
Calgary, Alberta

Contact Tina Head (613) 237-6885 or Joan Gaetz (403) 220-5722/6012 for information about registration and accommodation
or
see December Bulletin for more details.

BRANDON UNIVERSITY

Attend the November 1, 1985 Conference on

BRANDON UNIVERSITY: THE CHALLENGES FACING A SMALL UNDERGRADUATE INSTITUTION

For more information Contact:
Tom Mitchell
Dean of Student Services
Brandon University
Brandon, Manitoba R7A 6A9
Phone (204) 727-9779

CONFERENCE

The Politics of University Research

REGISTRATION FORM

Name _____
(Please include given name)
Title _____
Organization _____
Address _____
_____
City _____ Province _____ Code _____
Phone _____

November 21 (evening), 22, 23, 1985 Westbury Hotel, Toronto

November 21, 22

Guest speakers will discuss the following:
- The future of federal support for university research
- The provincial perspective on university research
- The private sector and university research
- New areas — women's studies and native studies
- Case study of an agency under fire
- CAUT and the funding of university research

November 23

Open to members of CAUT and associated organizations:
- Training program — media relations
- Training program — lobbying governments
- Guest speaker: Kathryn Warden, Editorial Board, Toronto Star

Complete program is available from CAUT. Registration $50 for Nov. 21 and 22 (includes lunch on 22nd). Registrants will pay their own travel and hotel costs. Those who register for Nov. 21 and 22 and are members of CAUT or associated organizations may attend the training sessions on Nov. 23rd (lunch included) at no further cost provided space is available. The training sessions are limited to 100 persons.

COLLOQUE

La recherche universitaire: une affaire de politique

BULLETIN D'INSCRIPTION

Nom et Prénom _____
Titre _____
Organisme _____
Adresse _____
_____
Ville _____ Province _____ Code _____
Téléphone _____

Colloque de l'ACPU à Toronto, les 21 (soir), 22 et 23 novembre, à l'hôtel Westbury

Les 21 et 22 novembre

Les conférenciers invités traiteront:
- de l'avenir du soutien à la recherche universitaire du fédéral
- de la perspective provinciale en matière de recherche universitaire
- du secteur privé et la recherche universitaire
- de nouveaux domaines — les études sur les femmes et sur les autochtones
- de l'étude du cas d'un organisme très critiqué
- de l'ACPU et du financement de la recherche universitaire

Le 23 novembre

Programmes offerts aux membres de l'ACPU et aux organismes associés seulement
- Programme de formation — relations avec les media
- Programme de formation — faire des pressions auprès des gouvernements
- Conférencière invitée: Kathryn Warden, équipe de rédaction, Toronto Star

Le programme du colloque est disponible au secrétariat de l'ACPU. Les droits d'inscription pour les 21 et 22 novembre sont de 50 $ et comprennent le déjeuner du 22. Les délégués assument leurs frais de déplacement et d'hébergement. Les membres de l'ACPU ou des organismes associés qui se sont inscrits pour les 21 et 22 novembre peuvent assister aux séances de formation du 23 novembre (déjeuner compris) sans frais supplémentaires, s'il y a assez de place. Les séances de formation n'accueillent pas plus de 100 personnes.